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**Deception Integration in the U.S. Army**

A thesis presented to the Faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree

MASTER OF MILITARY ART AND SCIENCE



By

JACK H. SPENCER, MAJ, USA  
B.S., California State Polytechnic University, 1974

Fort Leavenworth, Kansas  
1990

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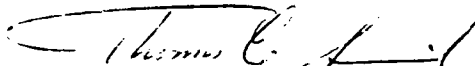
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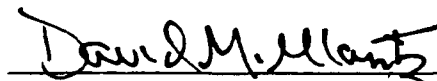
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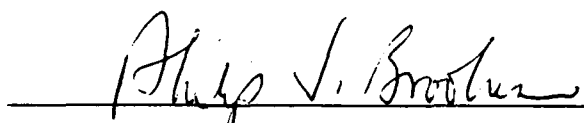
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the view of the U.S. Army Command and Staff College or any other governmental agency.  
(References to this study should include the foregoing statement.)



## Abstract

**DECEPTION INTEGRATION IN THE U.S. ARMY: An analysis of the current status of deception integration in United States Army doctrine and training with an overview of pertinent literature and three historical examples, by Major Jack H. Spencer, USA, 195 pages.**

The Army has begun the process of relearning and integrating deception into doctrine and operations. There is a lack of clarity concerning exactly what deception is and how it should be used. The state of doctrine and training both appear to be in need of aggressive review and modification.

History is clear on the lessons of deception. It is a potent combat multiplier that can be decisive in gaining surprise and initiative. Historical examples show that the costs of these operations are generally less than one would expect. The risk appears relatively low as well. Benefits, on the other hand, are uniformly significant, especially when compared to cost and risk.

The 1989 U.S. Army White Paper on Deception attempted to set the azimuth for deception integration. It failed to provide the urgency and priority required to initiate an action of this magnitude. This thesis uses the premise of "What the White Paper should have said" to explore the subject.

The paper makes recommendations based on interviews with senior defense officials, including Generals Starry, Cavazos, and Livsey; Dr. Edward Luttwak, and several experts in the field of deception. The recommendations address doctrine development, parallel training, and the integration of deception into planning. Training events such as BCTP, the NTC, JRTC, and ARTEPs must all integrate deception as a central point of concern if deception is to become a uniform and effective component of Army doctrine and operations.

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## Chapter 1

### Introduction

*All warfare is based on deception. Hence, when able to attack we must seem unable; when using our forces, we must seem inactive; when we are near, we must make the enemy believe we are away; and when far away, we must make him believe we are near.*

Sun Tzu  
The Art of War

*No human characteristic appears so suited to the task of directing and inspiring strategy as the gift of cunning.*

Clausewitz  
On War

Today the U.S. Army is working hard to develop a realistic and effective tactical and operational level deception capability. Current Army deception doctrine and practice is in its developmental infancy. Battlefield Deception (BATT-D) Elements are being fielded to divisions and corps for the planning and execution of deception operations. Equipment is being developed and fielded. The Army Training and Doctrine Command (TRADOC), with contractor support, is examining doctrine and situational applications to focus and guide this effort. Commanders and staffs are dealing with this fundamental change but one factor is consistently lacking. That factor is integration. Too often deception is not central to the plan executed. Deception operations are given too few assets and insufficient time to be effective. Combat, combat support, and combat service support unit operations are not coordinated to achieve reliable deception opportunities against sophisticated collection systems.

This paper will review and critique the current doctrine and practice of deception in the United States Army. This review will include examination of selected historical examples and the experience of senior Army and civilian experts. Finally, it will provide recommendations for improvements to the current doctrine and practice of deception. Thesis focus is at the operational level of warfare, with the caveat that corps can conduct operational level warfighting *on occasion*, and are therefore included in this paper.

Deception does not win battles, campaigns, or wars. At best it gains an advantage for the deceiver that may contribute to success. No component of warfare is more obscure than deception. It is theoretically regarded as a basic element of warfare. That fact is clearly reflected in the quotation of Sun Tzu shown above. In current U.S. Army doctrine, deception is, at best, subsumed under the aegis of surprise; at worst, it is ignored altogether.

In practice the employment of deception in the U.S. Army is sporadic and generally poorly applied. Most other world class armies routinely integrate deception as a key component of their military *cultures*.<sup>1</sup> The U.S. Army does not have an adequate deception doctrine of proven methodologies for given situations, either in the instruction programs at our schools or in the

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<sup>1</sup> Edward N. Luttwak, Personal Interview, (4 Dec 89), Chevy Chase, Md (Appendix C). Dr. Luttwak asserts that the use of deception as a component in one's suite of military tools (or force multipliers) is related to the military culture existent in that Army. A force dependent on and enamored of solutions based on overwhelming strength and material superiority does not generally support deception as a culture. On the other hand, forces faced with parity or situations of situational or material inferiority (real or perceived) *tend* to evolve a culture more appreciative of the leverage that deception operations can provide.

field. U.S. Army deception operations are more often the function of extraordinary leaders or conditions. Deception has only recently been included in the Army Training and Evaluation Program (ARTEP) and the Battle Command Training Program (BCTP). Neither of these key training vehicles emphasizes the planning or execution of deception operations as critical.<sup>2</sup>

There is a problem complicating the study of deception that confounds simplistic discussion. Each factor in a deception has complementing and countervailing forces that act and react to achieve the deception goal. The study of deception is a study of opposites. The target can be an individual commander or the opposing intelligence system. The goal can be to gain advantage in combat or to avoid combat altogether. Strategy and tactics are interactively bound. Military and political tools combine with strategy and tactics to deceive. Prevailing beliefs (or disbelief) provide the basic raw material with which deceptions are constructed. The list goes on. This is one reason for the general difficulty in dealing with deception.

### *Perceptions of Warfare*

Four areas in particular confound the study of deception. They are the issues of: secrecy, the tactical-operational-strategic interrelation, protection versus deception, and complexity. Before discussing any of these four areas,

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<sup>2</sup> BCTP results have shown that deception is seldom instituted as central to the units' operations, but rather as an applique applied after the fact to attempt to apply a deception to the operation which is already planned. These attempts are not uniform across units and they rarely succeed beyond Operational Security (OPSEC) support. (This comment is the author's impression resulting from interviews with BCTP staff personnel, such as Generals Cavazos and Clark, Colonel Smith, and Major Martinez).



however, a critical factor must first be considered. That factor concerns the overall perception of the concept of warfare with which one approaches the study or prosecution of deception. This perspective is critical to what one perceives deception to be and what one expects to accomplish by deception.

This paper is written from a pragmatic viewpoint. War is inevitably protracted and brutal. It is a sordid affair not given to quick resolution. Ambiguity and confusion reign supreme on this battlefield. This viewpoint does not see warfare of any sort, including "operations short of war" as a political tool of the first resort. This view does not search for tricks or gimmicks to ameliorate the brutality. Due attention is given to weapons and machines, but they are ultimately directed by the soldiers' guile and cunning.<sup>3</sup> This viewpoint recognizes the key position of the mental and intellectual struggle.<sup>4</sup> In this struggle deception can become central to gaining *momentary* advantage allowing a movement or counterstroke restrained only by the inherent friction and fog in which the battlefield is shrouded. Wars are won by the cumulative effect and outcomes of many such engagements. The

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<sup>3</sup> Cavazos, General Richard, Personal Interview, 5 Dec 89. The General's initial statement concluded that his view of the greatest command attribute has been amended through 11 (BCTP). "I want a commander with guile and cunning. Cunning is the concept. Guile is the fooling of people; they go hand-in-hand. Guile is bewitching somebody; cunning is the clever concept which you work from so cleverly."

<sup>4</sup> Clausewitz, Carl v., On War, Edited by M. Howard and P. Paret, Princeton University Press, Princeton, NJ, p. 202. Whether or not Clausewitz saw a role for deception per se, he did say "...it seems not unjust that the term 'strategy' should be derived from 'cunning' and that, for all the real and apparent changes that war has undergone since the days of ancient Greece, this term still indicates it's essential nature...."

most simple ruse can be of value if the resultant slowed reaction or misperception allows the efficient achievement of friendly objectives.

### *Secrecy*

Secrecy is an essential problem in the study and appreciation of deception. This includes security classifications, and also addresses the generally obscure nature of deception. Historically, deception operations are given the very highest level of classification. Planning is routinely accomplished in the most restrictive environment where the absolute minimum personnel are privy to the planned deception. Behind this veil of secrecy there will exist compartments whereby executive agents can be partially "read into" the plan to accomplish a portion of the activities required for execution.<sup>5&6</sup> These factors of security and compartmentalization combine to make most historical accounts of deception spotty and incomplete. The long periods between the events and declassification of them make accurate reporting rare.

Two elements of secrecy combine to further obscure an accurate assessment of deception's role in battles past. First, the winners rarely attribute their success to anything less than outstanding generalship and moral ascendancy. There are few recorded incidents where deception was decisive to a victory in and of itself. Here the author chooses to disregard

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<sup>5</sup> This is suggestive of the WW II quote of Sir Winston Churchill. He said of the deceptions supporting the D-Day landings, that the "... truth is so precious she should always be attended by a bodyguard of lies."

<sup>6</sup> Wheatley, Dennis, The Deception Planners, (Hutchinson & Co (Publishers) Ltd, London: 1980), pp. 18-19.

historical/mythical events such as Hannibal crossing the Alps and the Trojan Horse ruse.

Even where deception has played a major role, such as Operation Fortitude in support of the D-Day invasion of Normandy, there remained a major series of campaigns to defeat the enemy.<sup>7</sup> Second, there is an inability to publicly acknowledge how badly a particular side was actually deceived.<sup>8</sup> This is attributable to many factors. Chief among those factors is the losers natural inclination to rationalize the defeat and thus downplay the failure. More importantly, the weakness might continue and be exploitable again and is thus kept secret as a factor of national security. The reverse is sometimes seen where the deceiver assumes that the deception had a greater impact because the operations goals are achieved successfully.<sup>9</sup>

### ***Tactical-Operational-Strategic Interaction***

In the search for discriminators to facilitate discussion of deception, one of the most obvious is to discriminate between tactical, operational, and strategic deception. While the terms have some utility, there is not a convenient dividing line, and the divisions often confuse more than they illuminate.<sup>10</sup> Strategic and tactical deceptions are linked in much the same way as tactics are linked to strategy. There has to be coordination between strategic, operational,

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<sup>7</sup> Cubbage, T.L., "The Success of Operation Fortitude: Hesketh's History of Strategic Deception," Intelligence and National Security, no.3, (July 1987), p. 327.

<sup>8</sup> Herzog, Chaim, The Arab-Israeli Wars, War and Peace in the Middle East from the War of Independence through Lebanon, 2 ed. (Random House, Inc., NY: 1982), p. 316.

<sup>9</sup> Cubbage, pp. 328-329.

and tactical deception plans, just as there is coordination at all levels to achieve any operational end. This coordination need not preclude autonomous actions at lower echelons any more than strategy proscribes a given maneuver at the tactical level.<sup>11</sup>

The need for centralized control of deception is frequently stressed in U.S. Army doctrine. This thesis will accept that point, but will argue that restrictive and absolute centralized control is neither essential nor beneficial. Decentralized action can and should be condoned and may, in fact, contribute to a *believable* deception. Centralized control cannot be allowed to become inflexible control.

The linkage need not be overly restrictive nor prescriptive. Separate decentralized deceptions can exist at lower levels, but a deception strategy is best carried out in a relatively centralized manner. In this way lower echelons are orchestrated sufficiently to prevent them from undoing the overall deception goals of the campaign. Lower echelon deceptions not in concert with the picture general or specific perception being portrayed to the enemy force can be undertaken to confuse the picture. This does not proscribe

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<sup>10</sup> U.S. Army Field Manual 90-2, Battlefield Deception, October 1988. This point is addressed in the latest manual as follows: The title was formerly Tactical Deception. Now the document itself deals with tactical and operational level deception operations of significance to the Battlefield Deception Elements (BAT-D) currently being fielded.

<sup>11</sup> General Cavazos stated that "...there can be a deception at every level. Battalion, company, brigade, and division. You've got to be careful that the deception at brigade doesn't get in the way of division's deception. But it can be totally different in the form their deception takes...." (Note the echelon of emphasis).

limited objective deceptions at lower echelons, but only cautions that centralized control of them increases the overall chances for success.

An affiliated problem with strict strategic versus tactical delineations has to do with the issues of target selection and enemy responses desired as a result of the deception operation. When the deception instructions are passed to the lower echelons for execution the selected target and response set (i.e., persuade Front commander to deploy reserve forces north) may not be appropriate at a lower level. That echelon likely cannot *directly* influence that target effectively, while it could persuade the opposing Army or regimental commander to adopt a view complementary to the overall deception plan. A deception undertaken against one discreet target and target response does not enjoy a high probability of success.<sup>12</sup> Where a particular target response set is critical to the operation's success, the more assets focused on it, the greater the chance of achieving the desired result. This factor was operative in the Normandy invasions where different and complementary deceptions at all levels contributed to the deception portrayed. Too much attention can also compromise the deception.

Another problem in thinking about deception has to do with exclusionary thinking regarding this subject. Discussions of deception tend to start with the question, "At what level of warfare are we deceiving?" Here is an example of how a description can hinder rather than propel thought on a complex issue by reducing it *below* its common denominator. The concepts of

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<sup>12</sup> Cubbage, p. 328.

Strategic, Operational, and Tactical levels of war are meaningful, but they *do not* dominate the concept of deception in planning or execution. Was the landing at Inchon during the Korean War a strategic operation or a tactical operation? Or was it both? The answer is clearly both. Thus, this particular description hinders exploration of the essential nature of the solution used to solve MacArthur's problem. Yet, the descriptive element of the level of warfare often becomes unnecessarily central to discussions of deception.

### ***Protection versus Deception***

Operations Security (OPSEC) is well integrated into U.S. Army operations and doctrine. It is defined as "All measures taken to maintain security and achieve tactical surprise. It includes countersurveillance, physical security, and information security. It also involves the identification and elimination or control of indicators which can be exploited by hostile intelligence organizations."<sup>13</sup> This can be shortened by saying that the goal is to "hide the real indicators of your unit." This includes all frequency radiations, including audio, electro-magnetic, and olfactory ( Figure 1).<sup>14</sup>

Deception, on the other hand, is defined as, "Actions which mislead the enemy and induce him to do something counter to his interests. It includes

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<sup>13</sup> U.S. Army Field Manual 101-5-1, Operational Terms and Symbols, Oct 1985, p. 153.

<sup>14</sup> U.S. Army Battlefield Deception Briefing, US Army Office of the Chief of Staff for Operations (ODCSOPS-FDI), October 1989.

manipulating, distorting, or falsifying information available to the enemy to ensure security to real plans, operations, and activities."<sup>15</sup>

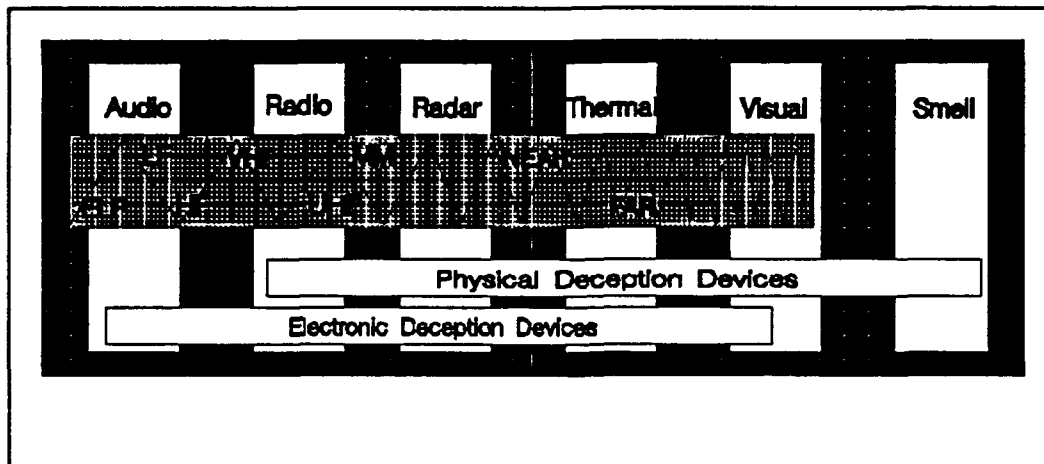


Figure 1. This chart shows the relationship among physical emanations, the electro-magnetic spectrum, and deception devices and decoys. Each operates in a discreet segment of the spectrum.

While the normal use of deception serves in the denial role, there are occasions when elements of the OPSEC program are manipulated to support deception. OPSEC can be scrupulously enforced or it can be selectively and purposely lifted to support a deception as in the case of demonstrations or displays. Here we see that there is an interactive and necessary linkage between these two concepts. Figure 2 suggests relationships between OPSEC and deception. This concept is referred to as the OPSEC - Deception Continuum (Figure 2).

Many see OPSEC as a separate activity unconnected to deception. This author disagrees with that view. Deceivers must strive to control and manipulate *all* outputs to the enemy. Cubbage has said, "Deception is best

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<sup>15</sup> FM 101-5-1, p. 1-22.

when a false impression held by an opponent is reinforced. What is real and what is revealed is what forms such misconception initially."<sup>16</sup> OPSEC includes

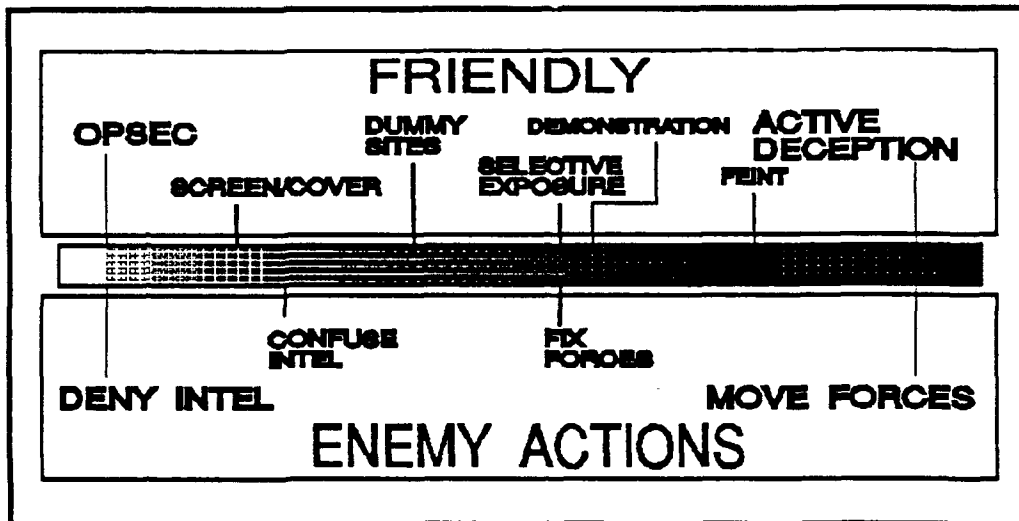


Figure 2. This chart depicts a range of activities along a continuum. At the left are the passive cover and emission control activities. As the scale progresses to the right toward deception the activities are characterized by increasing signatures.

the monitoring and control of the key physical indicators that opponents seek to exploit. The Soviets focus *maskirovka* (their term for deception) on the concentration and introduction of forces against an unprepared opponent, at an unexpected place. Viewed from the Soviet perspective, OPSEC *must be* a basic component of any serious deception effort. In the words of Soviet theorist S.N. Krasil'nikov:

...measures for the operational masking of them [movements] have special importance in the period of concentration and deployment. External indicators along the front and in the sector of Army concentrations must not display any kind of change noticeable to the enemy.<sup>17</sup>

<sup>16</sup> Cubbage, Personal Correspondence, April 1990.



What Krasil'nikov is referring to is what we call OPSEC in the U.S. Army. Particularly when related to the introduction of forces or the economy of force, control of OPSEC by the deceiver is mandatory.

### ***Complexity***

Attempts to reduce complexity by categorizing deception into discreet components often make its study more obscure. This factor is necessitated to some degree by the complexity and interrelationship of deception components. To examine constituent elements of deception it is necessary to disassemble a campaign or operation. This leads inevitably to simplifications and misinterpretations as to the way deception actually operates on the battlefield. This is true at the strategic, the operational, and the tactical levels of war. To simply isolate and study a single deception factor requires some disassembly, but deception is useful precisely because it is complex. It has relevance and is believable exactly because of the difficulty your adversary will have in attempting to disassemble your deception to discern the truth.

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<sup>17</sup> Krasil'nikov, S.N., *Nastupatel'naya armeiskaya operatsiya* [The Army Offensive Operation], (Moskva: Voeindat, 1940), quoted in *Soviet Military Deception in the Second World War*, Colonel David M. Glantz, Frank Cass, London, 1989, p. 18.

The current Deception Field Manual (FM 90-2) contributes somewhat to this descriptive problem. In Chapter One of this manual, fundamentals, myths, definitions, and maxims are presented in a non-integrated format. The maxims are illustrated with psychological terms, historical examples, and story-book allegory.<sup>18</sup> The resulting document obscures the subject rather than providing a basic "how to" document. It attempts to clear the confusion surrounding deception and to provide guidance to units in the field. This isn't accomplished in this version, despite a good effort by the authors. This particular work is used to illustrate how our zeal to completely describe a complex process tends to lead us to over-description. The resulting disassociation hinders comprehensive understanding. The understanding and application of the principles of deception require full and complete understanding of deception as an element of warfare.

### ***Thesis Methodology***

This paper will focus on the status of the development and integration of deception into U.S. Army operations. As related points are touched upon regarding planning, security, and the strategy of deception, they will receive comment as appropriate.

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<sup>18</sup> FM 90-2, p. 1-7. The concept of repeated false alarms is characterized as the "cry-wolf" syndrome from the old fairy tale. It's use in this document is attributed to a Central Intelligence Agency research entitled Deception Maxims: Fact and Folklore, (1981). Others, such as, Magruder's Principles, Jone's Dilemma, and the Monkey's Paw, do little to assist useful understanding. In fact, the introduction of additional terms in this area may only serve to further obscure this subject.

Chapter 2 will attempt to group definitions and types of deception in a manner useful to students, doctrine developers, planners, and operators alike. Chapter 3 will review key documents and resources consulted in the research. The final work reviewed in that chapter will be the U.S. Army White Paper on Deception. The four major points of that paper will then be used in the analysis of deception that follows in subsequent chapters.

Chapter 4 will review three selected examples of deception in history. The examples will focus on factors that offer future deception planners assistance in dealing with this complex subject. The analysis in chapter 4 will focus on the cost, risks, and benefits of the deception operations in the examples.

Chapter 5, the final chapter, will bring together the various facets we have looked at using the analytic frameworks developed in chapters 3 and 4. The issues of cost, benefit, and risk will be discussed in overview. The author will recommend modifications to the White Paper introduced in chapter 3. Recommendations will be proposed regarding doctrine development and the integration of deception into training and operations.

Attached as appendices are four interesting and important documents with relevance to this study. There are interview transcripts from three of the personal interviews conducted in the course of the research. They are the interviews with General Donn Starry, General Richard Cavazos, and Dr. Edward Luttwak. Also included as an appendix is an excellent technical article by T. L. Cabbage outlining the causes of the German intelligence failure in

WWII in great detail.<sup>19</sup> The document can also serve the commander, the deception planner, and the intelligence officer by discussing how people perceive and manipulate information.

The British Army Field Manual states that, "One of the inherent dangers of deception is the risk of deceiving or at least confusing friendly forces."<sup>20</sup> This paper will attempt to reduce, or eliminate some of the confusion inherent in the important business of deception.

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<sup>19</sup> Thomas L. Cabbage II is a senior counsel of Phillips Petroleum Company. Cabbage is also on the Editorial Advisory Board of the journal of Intelligence and National Security. In each of the last five years he has presented papers at intelligence, strategy, and military history conferences sponsored by the U.S. Army War College and the Royal Military College of Canada. A former Intelligence Officer, Mr. Cabbage is an expert in deception and its application in the world of *juris prudencia*; he brings an interesting and capable perspective to the study of military deception.

<sup>20</sup> British Army Field Manual. Volume V, All Arms Tactics, Part 5, Deception in War, 1985, p. 4-10.

## Chapter 2

### What is Deception?

*Although deceit is detestable in all other things,  
in the conduct of war it is laudable and honorable;  
a commander who vanquishes an enemy by stratagem is  
equally praised with one who gains victory by force.*

Machiavelli  
Discourses

Deception is central to the concept of strategy. Whaley prefers the classical term stratagem. Stratagem is a traditional word derived from the Greek word *strategos*, meaning "a general" or, "leader of an army."<sup>21</sup> Webster defines the word as, "an artifice or trick in war for deceiving and outwitting the enemy" or "a cleverly contrived trick or scheme for gaining an end." Both definitions speak to the core of the military art and to the essential element of deception.

Commanders who conceive of warfare in terms of stratagem and cunning do not find deception foreign.<sup>22</sup> In that context it is a completely natural base concept for all operations large or small. Surprise and initiative

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<sup>21</sup> Whaley, Barton, Stratagem: Deception and Surprise, (MIT, Boston, MA: 1968), 263 pages. Whaley's use of the word stratagem in the title of his comprehensive 1968 study is deliberate and shrewd. It sets the three key concepts of deception against one another in a balanced tension. Stratagem is only related to the word strategy by its root.

<sup>22</sup> General Cavazos includes the term guile in this context, but acknowledges the concept of cunning as a key component to the synthesis of operations planning or conception. He also concedes that "...we love the Rommels' and the Pattons' of history, then we have the old bread-and-butter...commander, a very methodical kind of guy, he ain't foolin nobody, he just fires correct and succeeds."

intertwine at the root of the plan. Deception opportunities shape the plan at each level and as each engagement or battle unfolds. The cunning commander seizes opportunities to defeat his opponent while preserving his combat power.

The lexicon of deception is characterized by dark metaphors and words of mystery and imagination. Deception conjures up notions of sorcerers, sleight of hand, and tricksters (and maybe thieves). Perhaps these views have been abetted by word of mouth histories telling of victories gained in ways not otherwise intelligible. Words such as ruse, artifice, gambit, feint, display, wile, ploy, trick, cunning, stealth, and double-cross, all talk to the business of surprise. There are so many, in fact, that our task is to reduce them to a useful set of common terms.

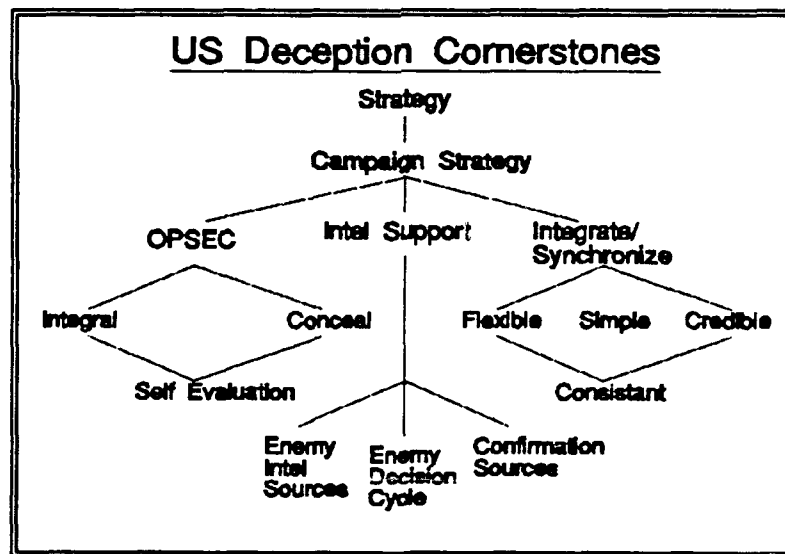


Figure 3. This chart approximates the U.S. Army deception hierarchy.

JCS Pub 2-02 defines deception as "measures taken to mislead the enemy by manipulation, distortion, or falsification of evidence to induce him to react in a manner prejudicial to his interests." The U.S. Army has developed

the "cornerstones" of deception shown in Figure 3. These have been arrayed similarly to the hierarchies in Figures 4 and 5 for purposes of comparison. We see in the U.S. cornerstones, a systems oriented approach to deception. The importance of cover and concealment is included in OPSEC and intelligence support is acknowledged as follows, "Battlefield deception operations rely extensively on the same level of timely and accurate intelligence as do combat operations."<sup>23</sup>

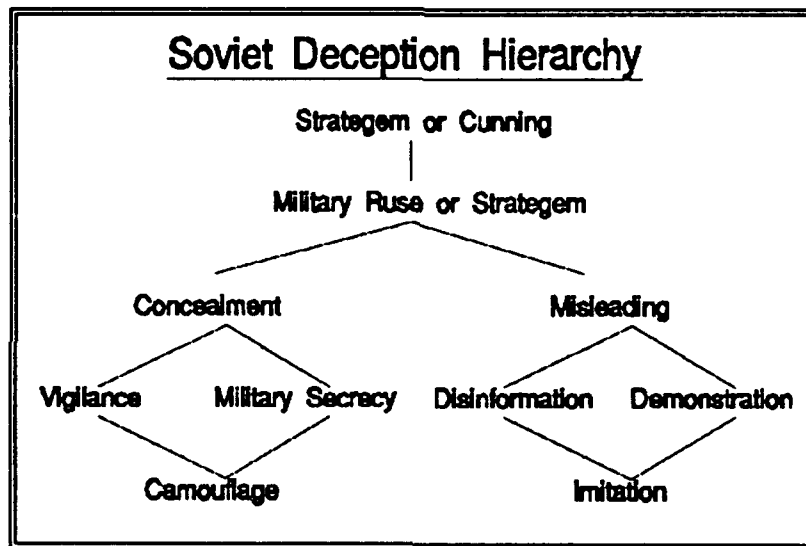


Figure 4. This chart approximates the relationships within current Soviet *maskirovka* doctrine. (Drawn from multiple sources).

The Soviets have developed a similar view of deception. Their hierarchy is more pragmatic and action oriented than ours, but it is nonetheless similar. It is shown at Figure 4. Note that the category of misleading aggregates disinformation and demonstrations together.

<sup>23</sup> FM 90-2, pp. 1-30 to 1-35.

The variety of possible deceptions is infinite. This author sees three major operational areas under the umbrella of military or battlefield deception. They are: Cover and Concealment, Disinformation, and Diversions. These categories are action related. OPSEC includes cover and concealment as subsets and reflects those activities taken to prevent enemy detection or observation of friendly activity. Disinformation refers to the use of words and passive visual cues to mislead people or machine sensors.

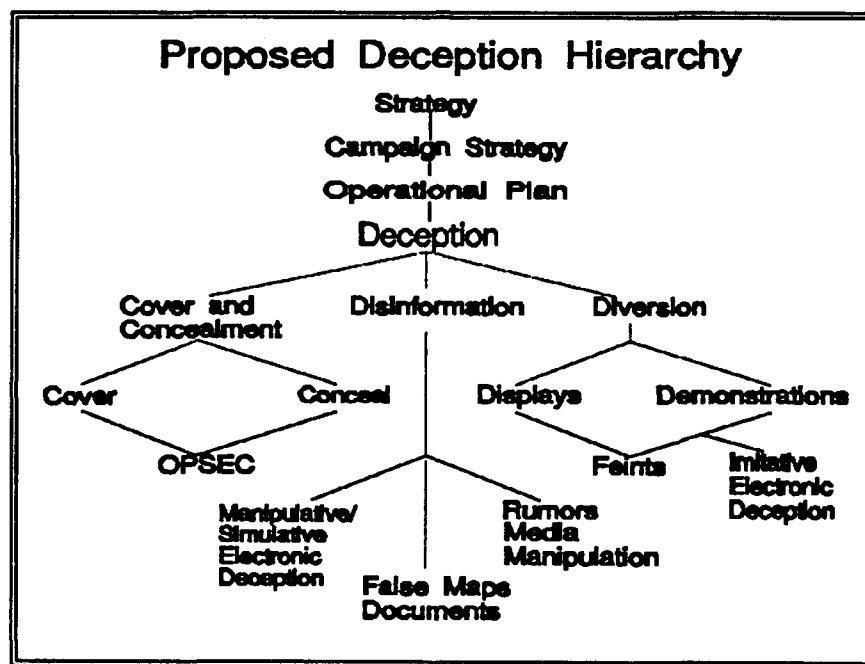


Figure 5. This hierarchy reflects the reality of current doctrine.

The final category of Diversions includes all of those actions undertaken to portray force where there are none or in greater numbers than are actually there. This alternative hierarchy is shown at Figure 5.



### ***Cover and Concealment***

This is an integral and necessary component of deception practice. FM 90-2 views secrecy as the basis of all deception.<sup>24</sup> Cover and concealment, under the rubric of OPSEC provide that secrecy. The more open an opponent is to collection and observation by his adversary, the more correspondingly difficult it is to achieve effective deception. Camouflage, use of cover, concealment, use of limited visibility, control of electro-magnetic emissions, and light discipline are all elements of passive deception.

They are also of components of OPSEC under this general heading.<sup>25</sup> This troubles those who would separate active deception from passive security measures. It should not do so because control of the perception the enemy gains from *all* of the unit signatures is central to deception. Therefore, just as OPSEC was centralized under the Operations Officer, so should all signatures (active deception and radios, light, movements, etc.) be controlled and orchestrated by the operator when executing deception.

During the Vistula-Oder offensive in January 1944, the Soviet Front achieved an unprecedented degree of operational security. It was so effective that the German intelligence system had only a vague and generalized picture of enemy dispositions. Worse still, the German's low regard for the Soviets

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<sup>24</sup> FM 90-2 emphasizes that active deception measures (such as developing indicators to portray false intentions) depend heavily on the passive deception measures of camouflage and secrecy.

<sup>25</sup> Army Regulation 530-2 governs OPSEC. Overall unit operational security posture was placed under the staff control and of the G3/S3 for coordination with *all* operations in the command.

manifested itself in a lack of aggressiveness in collection and update of the intelligence situation. The Soviets capitalized on this situation by concealing a series of lateral movements behind an impenetrable veil of *maskirovka*. Their operational security included no written orders, no radio or telephone traffic regarding the deception, and strict close-hold secrecy. Reconnaissance conducted by the attacking units was conducted in the uniform of the passage unit.<sup>26</sup>

The resultant deception put 29 Soviet divisional equivalents into the *Magnushev* sector where German intelligence anticipated 15. The results were shattering to this final defensive along the Oder River. This was a huge and dramatic deception that depended heavily on a basis of secrecy to achieve the active deception finally executed. Soviet OPSEC [*maskirovka*] was a component of the deception.

The corollary to this mask of secrecy is the practice of display or selective exposure to achieve an effect. That effect might be to fix a force in place, to serve as a "bait" for a baited attack, or to deliberately allow enemy intelligence collection on the unit prior to a surreptitious movement. Just as clearly as the forgoing example, exposures or directed lapses in OPSEC are vital components of deception.

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<sup>26</sup> Glantz, David. M., Soviet Military Deception in the Second World War, (Cass Limited, London:1989), pp. 479-480

### ***Disinformation***

Here we find some of the "dirtiest" tricks of the deception business. This perception likely stems from the trickery inherent in deceptions based only on words. The news broadcast (or psychological operations message), the false map, rumors planted to stir resistance, are all examples of inserting thoughts via written and spoken words to deceive a target audience.

On the line of active deception would be the "disinformation" conducted by electronic means. Both communications intelligence (COMINT) and electrical intelligence (ELINT) simulation devices exist. The former can simulate radio nets. Frequency modulation, amplitude modulation, microwave, and satellite communications devices have been demonstrated. Their use on the battlefield can cover the displacement of an actual unit or simulate the arrival and operations of a new unit.

The ELINT simulators can accomplish a role similar to that of the COMINT simulators. The difference is related to collection technology. Both superpowers can collect real-time location and identification data practically anywhere on earth. The reliability of this data and the predictability of air defense radar positioning allows an opponent to easily and accurately "template" the enemy force position and orientation. The introduction of these devices complicates the templating process greatly.

### ***Diversion***

This is a category of purely active measures. Normally these will include the risk or commitment of friendly forces to gain a desired result. The title has

a double meaning in that the friendly force will *divert* forces as a diversion or to divert enemy forces. The diversion can be away from an area of operations or into a trap or engagement area.

Diversions require the commitment of assets away from direct involvement in the main battle into the deception. A difficult application of this in U.S. Army doctrine is the so-called supporting attack. Routinely given significantly less combat power and combat support, this force has two major problems. First, by not having sufficient force ratios to defeat the enemy, the illusion of a main attack might not be achieved. Second, the operation cannot be realistically undertaken without actual engagement of the attacking force and the attendant problem of disengagement. Here is where the other elements of diversions can help achieve the goal without causing excessive losses in the supporting force. Decoy armored vehicles, massed in a reinforcing position can deter enemy counterattacks against the smaller force. Movements, noise, dust trails, etc can be created to simulate a larger force than is actually deployed.

Deception is a concept that includes many things the Army is already doing. OPSEC has progressed over the years to a generally excellent state. U.S. Army communications security (COMSEC) is unequalled in capability and level of implementation by any force. Cover and concealment is well integrated. Signature reduction is part of all tactical unit training. Equipment improvements assist this effort. Quiet generators, night vision devices, and improved camouflage systems cut into the ability of the enemy to detect us. It remains for us to produce doctrine that can now take us the next step. That

step is, the inclusion of active deception as an integral part of our operations. Perhaps review of pertinent literature can show us how best to accomplish this transition.

## Chapter 3

### Review of the Literature

*...a man of sense has always the advantage.*

Sophocles

Ajax

This chapter will review key documents consulted concerning the area of military deception and surprise. The reviews will not be extensive, but will attempt an overview of the author's key points. Where appropriate, portions of tables and other data will be presented.

#### ***Stratagem: Deception and Surprise***

Written in 1968 by Barton Whaley at the Massachusetts Institute of Technology this is the landmark study of modern battlefield deception. This ambitious project looked at 168 battles between 1914 and 1968 that initiated or had major impacts on wars or campaigns. The sixteen wars reviewed in the study are listed below:

World War I	1914-1918
Soviet-Polish War	1920
Greco-Turkish War	1921-1922
Italo-Ethiopian	1935-1936
Spanish Civil War	1936-1939
Sino-Japanese War	1937-1939
Soviet-Japanese Conflicts	1938-1939
Russo-Finnish War	1939-1940
World War II	1939-1945
Israeli War of Independence	1947-1949
Korean War	1950-1953
Vietnam Revolution	1946-1954
Suez War	1956
Bay of Pigs	1961
1967 Arab-Israeli War	1967
Czechoslovakian Invasion	1968

Whaley extracted those instances where the impact of deception on the outcome was of questionable nature. His results are reflected in the table at Figure 6.

War		Tactical				Strategic			
		Surprise	Deception	Both	Total	Surprise	Deception	Both	Total
WW I	1914-18	10		9	19	1		9	10
Soviet-Polish	1920				0	1			1
Greco-Turkish	1921-22	1			1			1	1
Italo-Ethiopian	1935-36				0				0
Spanish Civil War	1936-39	2			2	3			3
Sino-Japanese	1937-41				0				0
Russo-Japanese	1938-39				0			1	1
WWII	1939-45	5	3	15	23	5	5	30	40
Russo-Finnish	1939-40				0				0
Israeli	1947-49	1		1	2			1	1
Independence									
Korean War	1950-53				0	1		4	5
Vietnam	1946-54				0		1		1
Revaluation									
Suez	1956				0		1	1	2
Bay of Pigs	1961				0			1	1
Arab -Israeli	1967				0			1	1
Totals:		19	3	25	47	11	7	49	67

Figure 6. This shows the relationship of deception and surprise at the tactical and strategic level.

He defined the term deception from the perspective of the deceiver. His use of the term surprise focused on the *effect* of the deception (while allowing that some surprise occurs *without* deception). He thus separated the concepts of deception (the act) and surprise (the effect). In his words, "Thus defined, these terms avoid the easy pitfall of circular reasoning."<sup>27</sup> He defined four factors (acting alone or in concert) that produce surprise. They are, Secrecy, Preconception, Deception, and Response Time. He gave the following explanations for these terms.

<sup>27</sup> Whaley, p. 156.

**Secrecy.** Secrecy can shroud intention, but rarely is this complete. It [security] can introduce uncertainty, which can paralyze. He use the examples of Pearl Harbor and the Korea invasion.

**Preconception.** Strongly held "opinions" of expected enemy actions proved wildly incorrect in several of his reviewed cases. Pearl Harbor, Normandy, and the Chinese intervention in Korea are given as examples.

**Deception.** Whaley simply defined this important term as "the deliberate misleading of an enemy."

**Response Time.** He used the terms of "strategic paralysis or impotence" here when describing response time.<sup>28</sup> This describes the event where despite recognition of the threat or the attack, the enemy simply is not able to respond in a manner timely enough to affect the outcome. He references the Inchon Landing as an example.

Whaley attempted to remove bias from his analysis in order to accurately deduce the importance and the effect of deceptions in his study. Now we can review his findings for a moment. He excluded extremely small scale events, but did mix strategic and tactical as shown in Figure 6. He also excluded Churchill's "soft underbelly" theory because in Whaley's words "I am unable to judge, and the plethora of sources and studies generate more fog than clarification."<sup>29</sup>

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<sup>28</sup> Ibid, p. 156.

<sup>29</sup> Ibid, p. 157.



He compressed the data presented in the Figure 6 matrix down to that shown below in Figure 7. The table shows a very high correlation of deception between and surprise at both the tactical and strategic levels.

	Tactical Level		Strategic Level	
	(#)	(%)	(#)	(%)
Deception Only	3	6.4	7	10.5
Surprise Only	19	40.4	11	16.4
Deception & Surprise	25	53.2	49	73.1

Figure 7. This chart compresses the data shown in Figure 6 to emphasize the correlations.

Since Whaley has defined these terms to reflect cause and effect, the relationships appear valid. The relationships across so many conflicts and cultures suggest a high correlation.

Whaley's analysis pursued the important and affiliated phenomenon of culture as it affects deception. He looked at the national military doctrines of the countries shown below:

Britain	Germany
America	Russia
Japan	China
France	Italy
Israel	

These studies are brief with each of them involving only a few pages at most. He highlights several interesting points of divergence that the author will treat each very briefly.

### ***British***

Whaley, surprisingly, credits the American experience as the antecedent of the British tradition of military deception. The ruses of Stonewall Jackson were cited, in particular, by the British military scholar Henderson. Later in the Boer War, Henderson was instrumental in deceptions witnessed by the young major Allenby, who became Commander of British operations in the Middle East during WW I. One of his most interesting operations, the third battle for Gaza, is detailed in this paper as a historical study. World War One also had the famous A. P. Wavell as Chief of the Directorate of Military Plans in the Middle East. T. E. Lawrence said of Allenby (and his planner Wavell), that "deceptions, which were, for the ordinary General, witty hors d'oeuvres before battle, became for Allenby a main point of strategy." Together Allenby and Wavell influenced doctrine and their countrymen to the value and power of deception. Wavell continued the tradition into World War Two. Specific organizations for planning, command and control, and execution of deception were developed for prosecution of WWII. These organizations integrated deception into all operations, at all levels of war, to an extent not witnessed before or since.

### ***German***

German inter-war doctrine moved toward the inclusion of deception and surprise into their planning. Their doctrine conceded the value of tactical camouflage and lures. A partial explanation for the development of German deception skills might lie in the surreptitious rearmament conducted from 1918 until 1935.

The Abwehr Section III-D within the Military Intelligence service was charged with tactical deception planning and execution. Under the able leadership of the formidable Admiral Canaris, this section conducted misinformation against key opponents early in WWII. The High Command of the Wehrmacht (OKW) was the primary agent for strategic deception planning.

The Military Historian of the OKW, Lieutenant General Waldemar Erfurth wrote a book on deception entitled, Surprise in War. In it he argues that surprise is a "particularly efficient means of defeating the enemy." He, in fact, credited surprise with a more decisive role than can be supported historically.

Whaley makes the presumption that the modern Bundeswehr is the inheritor of these traditions of camouflage and surprise. He is careful, however, to point out that he had seen no evidence or writing to support the attribution of a keen interest in, or use of, deception on behalf of the modern West German Army. It must be recalled that the Germanic temperament is hardly receptive to dealing with what can only be described as the catastrophic failure of German Military Intelligence in WWII. This might account for an apparent lack of emphasis on it.

### ***American***

Much of the American deception effort in WWII is attributable to the influence of our British allies. MacArthur, Halsey, and Roosevelt have all been associated with deception, generally at the strategic level. The possession of

the Japanese diplomatic cyphers and the ULTRA machine made deceptions on our part practically unavoidable.

Not all American officers were enamored of the arts of surprise and deception. Camouflage remained a matter of local "improvisation" as opposed to a consistent doctrine, uniformly executed. Naval maneuvers in 1940 lacked any camouflage at all. Considerable work was done on this basic skill during the war.

Colonel George C. Marshall's assignment to the Infantry School from 1927 to 1931 is seen as a watershed event by Whaley. He refers to Marshall as "highly imaginative and unorthodox." These are hardly the concepts generally associated with this great soldier. Marshall's doctrine was incorporated in Infantry in Battle in 1934. Beginning a trend we see even now in U.S. doctrine, this book is lucid on the use and need for surprise, but only vaguely implies its connection with deception. This author makes almost the same comment in Chapter 1 with regard to the 1982 version of FM 100-5. The 1962 edition of this FM 100-5 states that tactical cover and deception are "*an integral part of all operational planning*" (authors emphasis).

### ***Russian***

Prior to WWII Stalin saw deception as a major factor in war. Whaley cited, however, a "curious ideological inhibition regarding the concept of surprise" following the German invasion. As a result of that cataclysm, surprise was downgraded as a component of warfare until later in the war. The current absolutist school surrounding the principle of *Maskirovka* arose as the Soviet

went on the offensive in the campaigns following Stalingrad. By November 1943 at the Tehran Conference, Stalin had once again come to appreciate the value of this powerful tool.

The shroud of secrecy enveloping most Soviet actions prevents complete understanding of WWII internal deception planning and control. It is believed that the GRU (Soviet Military Intelligence) was the responsible agency for deception.

Whaley concludes that "the Russians still have much to learn about the subtleties of stratagem." He cites poor officer training and the "failure of their advisory missions to, in any way prepare their Egyptian clients." He further says, that even their successful surprise-through-deception in Czechoslovakia in 1968 was more circumstance than clever ruse.

### *Japanese*

The decisive surprise stroke of Admiral Togo at Port Arthur set a tradition of deception and strategic surprise for the Japanese. Pearl Harbor fits that tradition perfectly. The Japanese were rated as fair at camouflage until later in the war, not unlike the Americans. The place of deception and surprise in a modern emerging (and rearming) Japan offers opportunity for speculation. Their rearming is being done quietly and privately and their horizon of influence is steadily growing. Few nations have embraced stratagem as the Japanese. Likewise, few are as secretive in its utility within their military.

## French

Whaley states, "The French are similar to the Italians in that they attempted to fight both World Wars without having understood, much less used strategic deception." He cites General Petain in WWI as the lone exception to this criticism.

Despite their long tradition of use and practice of stratagem and deception, the French failed to use it or even to fully grasp the potential for their own deception (surprise). The terms *stratagem*, and *ruse de guerre*, and *camouflage* are all of French origin. This makes the failures during the World Wars even more puzzling. Whaley makes an interesting observation regarding the level of optimum deception effect when he states, that "Despite this tradition the French managed in the 19th century to reduce this art to its tactical mode where it remained in virtual stasis."<sup>30</sup> Foch and DeGaulle treated the issue of deception "in passing" and then only at the tactical level.

The improvement on this condition in post-war French military doctrine is speculative according to Whaley. He cites the use of lures and ruses in their well-fought, but losing experience in Indo-China. He concludes his review of French deception and surprise with a quote from General Andre Beaufre a key theoretician in the French Army in the 1960's. Beaufre states that:

The essential factor in defeating the enemy was not force, but deception; it was necessary to delude him, to worry him, to disorganize him by an unexpected approach, and having thus created a weak point to exploit it to the full.<sup>31</sup>

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<sup>30</sup> Ibid, p. 79.

<sup>31</sup> Ibid, p.80.

## *Israeli*

Whaley saw the Israelis as the "contemporary masters" of the art of deception. At least equal to the British in employing deception and surprise. He saw their integration of deception as unique among contemporary small powers.

He speculates on Israeli deception integration because of their classification of this vital area. He thinks that deception planning in Israel may be self-taught as a "substitute for sheer force." The "exigencies of desperate survival may have led the Israeli leaders to unorthodox solution."<sup>32</sup>

Again, we find that some credit belongs to contact with Allenby accolytes Meinerzhagen, and General A. P. Wavell, who worked with Zionists in the two World Wars. One of the Zionists working under Wavell was Moshe Dayan. Of his work for Wavell's Intelligence Officer, Captain Orde Wingate, Dayan said: "Every Israeli Soldier is a disciple of Wingate. He gave us our technique."<sup>33</sup> Of the 14 rules of Israeli doctrine two deal expressly with surprise: 1) Always try for surprise in one way or another, and 2) When surprise is possible, don't expose movement with premature fires.

## *Chinese*

An old and well-established tradition of deception and surprise lies at the core of Chinese military doctrine. Sun Tzu's Confucian doctrine [principles] influenced the revolutionary military leadership of Mao Tse-tung. The Chinese performance in

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<sup>32</sup> Ibid, p. 81.

<sup>33</sup> Ibid, p. 82.

the Korean War showed understanding of, and great capacity for, deception and surprise at the operational and tactical levels of war.

This doctrinal basis was at the root of the modern People's Army. Given that Whaley was writing during the cultural Revolution he had little to say about the realities of the modern Chinese Army of today.

### *Guerrilla*

In his discussion of the place of surprise and deception in military theory, Whaley talks about guerrilla wars. Alternately called small wars, irregular, or unconventional warfare, Whaley sees deception as a key component to the theory of these "low intensity" conflicts. He cites five characteristics that unite conventional and unconventional warfare. These characteristics are: deception, surprise, mobility, flexibility, and an effective information system (i.e., C<sup>2</sup> and intelligence). He recognizes the vast differences between conventional and unconventional warfare, but cites these five characteristics as principles might constitute the conditions for success in guerrilla warfare. Whaley contends that Liddell Hart's 1929 study The Decisive Wars of History developed the "indirect approach" by the combination of these two forms of warfare. This author contends that deception and surprise are useful at the tactical level in unconventional warfare. The applicability and integration of operational and strategic deception in guerilla warfare is more difficult and has not been studied to any great degree.

### *Conclusions*

Whaley dedicates his last chapter to making what he calls "speculative" conclusions. He introduces five new topics by which to organize his conclusions.



They are: the Security of Options, the Economics of Stratagem, the Strategic-Tactical Dimension, the Permanency of Stratagem, and Total Stratagem and the Fog of War.

### ***The Security of Options***

He seeks to show in this discussion that the deceiver with options in his plan has an immense advantage. His security (peace of mind) is proportional to the insecurity of the victim. If discovered the deceiver with options can still use timing, misdirection, and objective to his advantage under a new plan.

Since Whaley looked at the opening battles of wars or campaigns he can talk about his second key with some authority. He says, "In the preliminary stages, I suspect that these commanders have often quite calculatedly rigged their starting point so that it offers viable alternatives." In such instances the intelligence officer can only offer "best" courses of action and cannot in any way really know the surprisers intention. This gives the deceiver initiative.

### ***The Economics of Stratagem***

Here Whaley states that: "Taking economics to include the trade-offs between two interrelated activities, the efficacy of stratagem may be evaluated relative to certain other military and intelligence operations."<sup>34</sup> He goes on to conclude, and to forcefully argue, that stratagem (deception and surprise) is cheap, in terms of men, labor, and materiel. He does not discuss the question of *relative value* when scarce resources are up for grabs in deception operations.

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<sup>34</sup> Ibid. p. 232.

### ***The Strategic-Tactical Dimension***

He saw no "strong" distinction emerge in his data between strategic and tactical surprise. He found no consistent "differences in the theory, nature, practice, or effects of deception...."<sup>35</sup> He admitted to certain advantages on the part of each but could not find distinguishing differences of statistical significance in the data.

### ***The Permanency of Stratagem***

Despite the fact that stratagem (deception and surprise) has been at times in disfavor, Whaley asks if stratagem has permanent relevance for the theory and doctrine of war.<sup>36</sup> He discredits a remark of Clausewitz' that posited that increased communications and information availability made strategic surprise more difficult. Students of Clausewitz have seized this one statement "proof" of Clausewitzian basis for discrediting surprise. Whaley disagrees with this notion. The availability of unprecedented amounts of information may even make deception easier and thus more attractive. I am reminded here of Dr. Luttwak's statement that common sense is the ally of the deceiver. Intelligence, information, and communication systems are fast, but troops and weapons can be concentrated and delivered faster. Perhaps more important is the fact that false and misleading information can be delivered faster. Intelligence systems can be inundated with data and forced into overload.

### ***Total Stratagem and the Fog of War***

Here Whaley talks of the manner in which stratagem, surprise, and deception combined with security contrive to rob an enemy of reliable information. He quotes Mao Tse-tung on this point:

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<sup>35</sup> Ibid, p. 247.

<sup>36</sup> Ibid, p. 250.

...we must try to seal the eyes and ears of the enemy, making him blind and deaf, and to create confusion in the minds of the enemy commanders, driving them insane.<sup>37</sup>

In this same vein he talks of the oriental fascination with manipulating the fog of war. Similar to the points raised above, the denial of corroborating data can exacerbate the problem of information overload.

### *Summary*

Whaley concludes with, what I think may be, the simplest and most eloquent argument for the practice of deception and surprise as a component of the art of war. He says:

...success will usually go to whichever side can introduce the larger favorable bias among the otherwise largely random events that attend his plans, decisions, and actions. Military theories or doctrines can be potent guides for introducing such biases in the system. This theory is offered as one such guide.<sup>38</sup>

### *Strategic and Operational Deception in the Second World War*

"Strategic and Operational Deception in the Second World War" (July 1987) is the quarterly publication National Intelligence and Security. The editor is Michael I.

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<sup>37</sup> Ibid, p. 257.

<sup>38</sup> Ibid, p. 263.

Handel who is on the faculty at the U.S. Army War College at Carlisle Barracks, Pennsylvania. Contributors and editors to this issue represent a virtual who's who of the study of deception. In the author's review of literature this was the single best reference of recent vintage. Handel's 82 page introduction itself is a comprehensive and concise treatise on this subject. He cites Clausewitz, Whaley, Betts, Cruikshank, Hesketh, Wavell, Liddell Hart, Wheatley, Dudley Clark, and Herbig. A notable list of the experts of deception.

Handel begins with a historical review of deception from the Greeks through 1940 and the Battle of El Alamein. His opens with an observation that highlights the western world's general reticence to use deception:

Yet despite their recognition of deception as a very important - perhaps even decisive - dimension in waging war, strategists have never accepted it as one of the 'basic principles' of the art of war.<sup>39</sup>

He associates this trend with Christianity and chivalry and cites Neal Wood's statement below in support of that assertion:

"Christianity had a part in fashioning medieval warfare in both theory and practice. Between medieval foes there was the bond of Christian conduct and gentlemanly behavior that tended to mitigate the nature of the punitive action resorted to by the victor. *This may account for the fact that medieval commanders did not make full use of the stratagems that had been a common part of the classical military leader's repertoire. Conversely, the medieval commander seemed particularly susceptible to the employment of deception and trickery by ruthless and unchivalrous opponents.*"<sup>40</sup>

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<sup>39</sup> Handel, Michael, I., "Introduction: Strategic and Operational Deception in Historic Perspective," in Intelligence and National Security, Cass, London, 1987, p. 1.

Societies who seek victory at the lowest cost have a naturally greater interest in the use stratagem and ruse. Those societies that see the commander's action during the battle as the consummate demonstration of generalship focus instead on the deceive engagement. The Napoleonic wars and the schools of thought that sprang from them (Jominian and Clausewitzian) took the direction of mass and decisive engagement. Clausewitz felt that the use of forces and firepower to create a "sham" risked their diversion without gain.

One of the greatest deceptions in modern times was conducted at the third battle of Gaza during WWI. This author, in fact, uses that deception as a historical reference in Chapter 4. Likewise, Handel places a good deal of emphasis on this deception in his introduction. One could say that the reemergence of deception that the U.S. Army is currently engaged in has its antecedents in this masterful and complex deception of General Allenby in WWI. Allenby's intelligence officer, Major Meinerzhagen contrived to drop a dispatch case where the Turks would find it. The "lost haversack" contained uncontested "evidence" that the attack against Beersheeba would only be a ruse to take pressure off of the main attack along the coast toward Gaza. Several units, including the Australian Light Horse Infantry, were secretly moved into position near Beersheeba. After two days without water the Light Horse made one of the last successful cavalry charges and captured Beersheeba, opening the "back door" to Gaza and victory. The Turks were so "sure" that Gaza was the objective and that the approach was up the coast that their belief predisposed them to deception and defeat.

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40. Wood, Neal, Introduction to The Art of War, Niccolo Maciavelli, (Bobbs-Merrill, Indianapolis, 1965), pp. XXIV-XXV. (Handel's Emphasis)

World War II saw deception used in all theaters of war and at all operational echelons. Tactical level camouflage and concealment tactics adapted to the new lethality of this savage war. The deceptions (actually a set of deceptions) that supported the Normandy landings were unprecedented in scope and degree of success. They were unique in many ways. Key to their special status in the study of deception are two critical components of the WWII situation. First, the allies had broken the German Cypher systems (Ultra) and thus had access to virtually all of the Third Reich's wireless traffic. Second, the XX (double-cross system) of "doubled" espionage agents provided direct input into Hitler's High Command. Thus we had the perfect ability to determine the targets disposition to a specific event and feed the data required to manipulate the perception as we wished. This factor (similar with the Japanese) must be kept in mind. We cannot count on such a situation repeating itself.

The above points are discussed at length in four of the articles included in this excellent publication. They are listed below:

John P. Campbell	Operation Starkey 1943: A Piece of Harmless Playacting
T. L. Cabbage	German Misapprehensions Regarding Overlord: Understanding Failure in the Estimative Process <sup>41</sup>
T. L. Cabbage	The Success of Operation Fortitude: Hesketh's History of Strategic Deception
Klaus-Juergen Muller	A German Perspective on Allied Deception Operations in the Second World War

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<sup>41</sup> This study is included at Appendix D with the kind permission of Dr. Handel and Mr. Cabbage. It will prove a valuable aid to future deception planning, as well as to intelligence officers attempting to fathom whether or not *they* are being deceived. It could serve as an outstanding training manual for intelligence analysis as well.

A key aspect to the WWII development of deception that is of particular interest to us today is the organizational and planning mechanisms created to coordinate and execute such vast deceptions. That is covered in Handel's introduction and in the Hesketh Report. The Hesketh report was actually titled Fortitude: A History of Strategic Deception in North West Europe - April, 1943 to May, 1945. It was originally submitted as a Top Secret, official document in 50 copies in February 1949. It details the entire range of deceptions for D-Day that resided under the umbrella of the Fortitude deception.

Colonel David M. Glantz's contribution to this study is the article, "The Red Mask: The Nature and Legacy of Soviet Military Deception in the Second World War." This article reflects the central elements of Colonel Glantz's in-depth study of Soviet doctrine as the Director of the U.S. Army's Soviet Army Studies Office (SASO). His research has made use of both German and Soviet records. In many cases he is able to show, to an unprecedented degree of specificity, the exact intent, scope, and enemy perception of given deception operations. It is of particular relevance to U.S. Army officers, in the perspective it provides into overall Soviet operational doctrine. In this article he examines the experiential and theoretical basis of Soviet *maskirovka* which has developed into a key component of all Soviet operations since 1941. He also looks at several major engagements starting with the offensive at Moscow through the Beylorussian engagements, comparing Soviet planning maps to actual German intelligence estimates. He emphasizes that *maskirovka* is far more than masking by cover and concealment, but rather a system to produce at all levels of war confusion, shock, and the opportunity for decisive maneuver. His familiarity with post-war Soviet military doctrine confers on his work a great deal of credibility. I have used Colonel Glantz' newest book, Soviet Military Deception in the Second World War, as a key

reference for one of the historical vignettes cited in Chapter 4. His well documented work on this subject is without peer and will undoubtedly benefit military historians well into the future.

Katherine L. Herbig contributed another perspective to this collection with her "American Strategic Deception in the Pacific, 1942-1944." Herbig, a faculty member of the Naval Post Graduate School in Monterey, California, originally presented this paper at the U.S. Army War College Conference on Intelligence and Military Operations in April 1986. She looks at abortive and formative deception operations in the Pacific theater prior to the invasion plans for Japan (Operation Pastel is covered separately in this chapter). Her focus is on the attempt to create a deception organization to coordinate deception operations in the Pacific. They were not really successful. While there were some successful deceptions undertaken on the road to victory, they were not organizationally successful in the British model. Coordination was never really achieved between the various commands on the issue of deception. As Herbig's states:

The American high command never granted its deception agency the access to the top-level commanders and the sweeping authority enjoyed by the London Controlling Section, a fact bitterly resented by US deception planners.<sup>42</sup>

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<sup>42</sup> Herbig, Katherine L., "American Strategic Deception in the Pacific," in Intelligence and National Security, Cass, London, 1967, p. 283.



### U.S. Army Field Manual 90-2 (Battlefield Deception)

This field manual represents the "revitalization of the lost art of deception."<sup>43</sup> It was written at the Intelligence School at Fort Huachuca. Its development and publication coincided with the decision to field Battlefield Deception Cells (Batt-D) to Divisions and Corps throughout the Army. Originally Fort Huachuca had responsibility both for the training of the Batt-D cells and the publication of FM 90-2. At present, responsibility for the FM has since moved to the Combined Arms Center at Fort Leavenworth to better integrate deception into other Army doctrine.

Chapter One is essentially a primer or overview on deception. It includes where deception came from, definitions, and a generally informative collection of deception "maxims." While not precisely the information one expects in a field manual, it is, nonetheless, an informative and generally comprehensive overview of this subject.

In reviewing the recent history of deception in the U.S. Army the manual states: "During the early eighties the Defense Science Board recommended that DOD and the services pursue deception as a low-cost, high pay-off methodology to achieve operational advantage."<sup>44</sup> As the Rand Study (reviewed next) points out this is partially accurate. The chapter goes on to examine some of the "myths" associated with deception. They are:

- Surprise comes from Luck.
- Deception plays a trivial part in warfare.

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<sup>43</sup> FM 90-2,p. 1-0.

<sup>44</sup> Ibid, p. 1-0.

- Growth in intelligence capabilities prevents deception
- Deception is only for combatants.

These "myths" are patently false as the author shows in a brief, but noteworthy fashion with these few comments:

- Surprise can be enhanced by deception efforts.
- Patton believed that "deception and cover should be a normal part" of campaign planning.
- The increased collection presents greater opportunity to "feed" data.
- The 1973 Egyptian offensive was aided by "150 deceptions in political, economic and military forms."

The following examples and anecdotal references are inaccurately titled maxims. They do, however, provide some valuable insights into the process, history, and utility of deception.

***Magruder's principles.*** The exploitation of perception. He most accurately states, that "It is generally easier to induce an enemy to maintain a pre-existing belief than to present evidence..." contrary to that belief. This may truly be a maxim of deception. The table at Figure 7 demonstrates the extremely high correlation shown when the preconception is supported by the deception effort.

***Limits to Human Processing.*** In this context two key portions of the analysis puzzle are presented. The law of small numbers basically posits that inference (and subsequent inference based assumptions) taken from too small a sample is notoriously and statistically inaccurate. Also included here is the problem of human susceptibility to conditioning. As an example they cite German jamming of the British

radar in support of the breakout at Brest Harbor by the Scharnhorst, Gneisenau, and Prinz Eugen in 1942. British preconception encouraged them to dismiss the jamming as interference or weather and contributed to the famous (and avoidable) escape.

***Cry-Wolf.*** This refers to the impact of repeated false warnings or alarms. Over time they desensitize the victim, slowing or entirely paralyzing reaction. The Vietnam Tet Offensive in 1968 is cited here. Every year Tet was predicted to bring withering attacks and upheavals that never materialized. As we know, a coordinated attack appeared with a vengeance that profoundly shook a relatively unprepared The Army's field command (MAC-V) and the American people.

***Jones Dilemma.*** "Deception becomes more difficult as the number of channels to the target increase. However, the greater the number of *controlled channels* the greater the likelihood the deception will be believed."<sup>45</sup>

***A Choice Among Types of Deception.*** This section suggests that there are two convenient classifications for deceptions, Ambiguity and Misdirection. The goal is to make the victim not less certain of the truth, but *more* certain of a particular falsehood. He uses a great quote to illustrate this point; "The idea is to give your target a kaleidoscope to play with and then let him use it as a looking glass."<sup>46</sup> Another very apt quote is given by the author without reference; "The strategy of misdirection is clear; to make the enemy very certain, very determined, and *completely* wrong."

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<sup>45</sup> FM 90-2, p. 1-9.

<sup>46</sup> Ambler, Eric, Send No More Roses (London: Weidenfeld & Nicolson Limited, 1977), p. 62.

***Axelrod's Contribution: The Husbanding of Assets:*** Axelrod is the author of "The Rational Timing of Surprise."<sup>47</sup> He makes the point that deception devices (which can be interpreted as ploys and materiel) can be most effective when withheld until the optimum point for introduction. The author also asserts that there are occasions when a deception might invoke responses for which one side (or an ally) is not prepared. This last point is strategy more than deception oriented.

***Importance of Feedback.*** The authors emphasize the importance of ULTRA (the German cypher system decrypted early in the war) to the planning and execution of the deceptions against Germany. It is absolutely essential that the deceiver have some feedback to determine whether or not the victim has taken the deception "bait." This author personally believes that there is a relationship between the requirement for feedback and the level of risk connected with a given deception. That is, as the success of one's operational plan becomes more dependent on the success of the deception, the element of feedback becomes increasingly critical to minimize risk.

***The Monkey's Paw.*** The allusion here is to attempting to unravel the monkey's gripped fist. The point is that deceptions can produce many "subtle and unwanted" side effects. Deception security is often a chief cause of unwanted reactions. "It is generally acknowledged that the number of knowledgeable people should be minimized, even to the point of misleading your own forces."<sup>48</sup> The following example readily illustrates this point. Deception and propaganda efforts were broadcast to the Germans in France to convince them *prematurely* of the Allied

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<sup>47</sup> Axelrod, Robert, "The Rational Timing of Surprise", World Politics, (January 1979), pp. 228-246.

<sup>48</sup> FM 90-2, p. 1-10.

invasion. This was done while attempting to *prevent* premature action by the French resistance.

In any case, it was bad for morale if hopes of liberation were raised by the voice of London' only to be dashed...but in France the PWE had already cried "wolf" twice...and there was a real danger that French Resistance would cease to believe in anything London said.<sup>49</sup>

Another excellent example is cited. It comes from the master of military deception, General Wavell, from his World War II experiences with the Italians in Ethiopia (ne Abyssinia). In 1941 he devised a deception indicating an attack against the Italians from the south. His plan was then to concentrate and attack from the north against a distracted foe. The result could not have been worse. The Italians "drew back" in the south and in economizing sent additional force to their northern flank, the net effect being the concentration of their forces in the north. The lesson taken from this event was that: "...the deception must be based on what you want the enemy to *do*, never on what you want him to *think*." <sup>50</sup>

*Care in the Design and Placement of Deceptive Materials.* The story of the compromised German war plans for Belgium and Holland is related. Three German officers who crash landed in Belgium were captured. In custody they attempted to burn the plans and maps they had. They were discovered and the plans taken. The

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<sup>49</sup> Cruikshanks, Charles, Deception in World War II, (Oxford University Press, New York:1979), p. 56.

<sup>50</sup> Mure, David, "Master of Deception", (1980), p. 82 (Author's emphasis).

Belgian authorities would not believe that the Germans could be so careless and thus discarded this windfall that could have changed the course of WWII.

The next example given here is that of the famous "going-map" ruse undertaken at Alam el Haifa near the Alamein line. The Germans were envious of the British going-maps which displayed terrain and movement factors in great detail. The British contrived to print one of these falsely showing the direct route to Alexandria as the best and the best route as marginal and slow. The British then "arranged" for an armored car to strike a mine and the car to be abandoned with the map in a case with the car. The plan worked and the Germans disastrously attacked over rough going terrain into the prepared defense.

*Chapter Four: Deception Planning Considerations.* Three basic planning frameworks are discussed in this chapter's introduction. They are the commander only, the close hold, and the *ad hoc* staff techniques. The techniques are generally self-explanatory. The fielding of the BATT-D elements obviate the requirement for *ad hoc* staffs (at least at the division and corps level). Commander only (or close hold) tends to be the most often used technique. In this method a commander and presumably his ADC(M) and G3 can order a feint (supporting attack) which will be brought off with authority and believability, since the executing commander isn't aware of the deception purpose of his mission. Other significant problems accrue to practitioners of close hold deception. Many of the unwanted side effects alluded to in the Monkey's Paw discussion can and will occur. It is interesting to this author that Division and Corps staffs charged with immense responsibility and handling top secret (and higher) material cannot be privy to deception planning information. This

appears to be a short sighted, but oft repeated problem in deceptions and other special operations type activity.

The issue of the planning process is discussed without resolution of the dissemination problem raised above. Thus the discussion of the planning process does little more than overlay the deception requirements over the current planning process model.<sup>51</sup> The problem of secrecy and the staff process are critical. What is needed is a deception planning process model that focuses on the required staff participants and lays out the planning process to optimize the commanders' time and control through involvement at key points. This last is perhaps the central failure of this current FM 90-2.

***Operation El Paso - Deception in Low Intensity Conflict.*** This segment of the chapter on operations relates the successful deception conducted by the 1st Infantry Division near An Loc, Republic of Vietnam, July 9, 1966. Information exposing a planned resupply and engineer equipment convoy from Minh Than north to An Loc. The Division anticipated the enemy reaction as an ambush at one of a number of prospective sites. The "lightly" armed convoy was actually constituted of armored cavalry and infantry. Additionally, the Division prepared airmobile operations against the most likely ambush sites. As it developed the Vietcong ambushed the convoy and succeeded in springing a trap on themselves that ultimately cost the Regiment 50% losses.<sup>52&53</sup>

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<sup>51</sup> FM 101-5, pp. 5-4 to 5-10.

<sup>52</sup> This is not a usual form of deception and is reminiscent of the baited trap tactic most recently propounded in the Light Infantry Battalion Field Circular. This author is not aware of other deceptions of this type. The placement of Napoleon's right wing in low ground at Austerlitz might be considered as similar, in that it appeared to be so placed to induce the

### ***The Rand Corporation Deception Briefing.***

This briefing was presented at Fort Leavenworth in the summer of 1989. It reflects the current status of deception studies undertaken by the Rand Corporation, Arroyo Center, in 1985 at the urging of the USAREUR Commander General Glenn K. Otis with the strong backing of the Army Chief of Staff General Wickham and General Riscassi (later Vice Chief of Staff of the Army). The study began with a number of limited scope studies that established the two primary Rand researchers as experts in the field of military deception.<sup>54</sup>

The foreword of the briefing states a few basic principles that extend or clarify existent definitions somewhat. These definitions are worth reviewing here as they are valid and basic to the Arroyo Center's approach to this subject.

- Deception involves the concealment of **intent**, not just disguise.
- Provoke enemy to a certain course of action, not to **uncertain** behavior.
- Manipulation and exploitation of behavior are the **parts** of deception.
- It is a deliberate **process** resulting from a **strategy**, not an serendipity.

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Prussians to attack and thus vacate the dominant high ground. Since Napoleon did not directly comment on this maneuver, however, this is all speculation.

<sup>53</sup> Dr. Fred K. Feer and Mr. John Arbeeney have worked primarily in the deception area over the last five years. Mr. Arbeeney is the primary author of this study.

<sup>54</sup> The initial Arroyo project in this area investigated deception activity in 27 task force rotations at the National Training Center (NTC). Dr. Feer was the lead researcher on this project. His research revealed three interesting and correlated findings. The first being that units who plan and execute other missions well, tend to plan and execute effective deceptions. The second is that units who have problems in planning and/or execution tend to have problems in planning and conduct of deceptions (indeed the effort these units put toward deception related activity actually degraded their overall performance). Lastly, units who could effectively plan and execute all missions (including deception) *appeared* to perform better on the whole.



The study had two objectives reflected in their statement of work. The first is to help the U.S. Army evolve a functional operations based battlefield deception capability. The second is to establish and sustain a center for deception research and expertise. The first reflects the Army's commitment to developing a deception capability. This second point was intended to address the reality that career development and other officer moves tend to deprive the Army of the long-term expertise necessary in this area.

The research objectives also include looking at current battlefield deception assets and techniques by interviews with commanders and NTC rotation observation (the study previously mentioned). Next they would determine the adequacy of current deception doctrine and planning methodologies. Finally, they would investigate the viability of modeling as a deception development and evaluation tool. This last include modeling of the Multispectral Close Combat Decoys (MCCD) and their impact on engagements, attrition, and enemy operations.

The most significant new item in this briefing is the concept of Operations-Based Deception. The goal of operations-based deception is to control enemy behavior to produce a desired result. The actual definition is: "Deliberate use of operations flexibility to manipulate and exploit enemy behavior."<sup>55</sup> In explanation of this definition they explain that operations-based deceptions create surprise *and* provide flexibility to the command. Further, they say that this basis "implies congruence among integral courses of action."<sup>56</sup> In other words, courses of action (COAs) will share certain aspects or operations (congruence), but diverging COA's

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<sup>55</sup> The Arroyo Center Deception Briefing, pp. 9-9B. (Emphasis is by Arroyo Center) authors.

<sup>56</sup> Ibid, p. 9A.

will exhibit discreet indicators unique to that COA (incongruence). This rather convoluted concept leads the Arroyo team to recommend development of operational planning that maximizes congruence between adopted operational COA's and deception COA's as a means of imbuing the latter with credibility.

They further recommend that TRADOC investigate means for implementing operations-based deception actions in all combat service and combat service support elements to support this recommendation. They cite the example of an engineer unit placing obstacles as an activity that can span a range of operational styles or techniques. The unit can deploy mines above ground, rapidly during daylight or conduct the operation covertly during darkness on successive days. There obviously exists an entire range between these two extremes, in which, the same mission can be accomplished with entirely different signatures emitted and intentions portrayed. The concept is at once confusing and beguiling. Current indications would suggest a detailed feasibility examination at the least.

Regarding the Battlefield Deception Elements (BATT-D), they concluded that "...it is not clear that the Army clearly understands its own need for specialized unit deception support." Arroyo sees their ultimate problem here as twofold: First, to what extent do BATT-D elements require support for 1) Node survivability enhancement, and 2) Enemy operations plan manipulation, and second, what are the appropriate targets at this level and what realistic deception objectives can be achieved at the Corps and Division levels.<sup>57</sup> Likewise included is the issue of where are the elements themselves most efficiently positioned. They identify that equipment fielding (and indeed the current purchase) falls far short of the TOE authorizations and need.

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<sup>57</sup> Arroyo Center Briefing, 30 June 1989, Slides no. 8-9.

Key equipment shortages are identified as tents, camouflage nets, antennas, and vehicles.

The methodology that will be employed to determine the optimum MCCD usage will be the JANUS computer simulation. The intent is to model using various force and terrain profiles to develop the system employment doctrine.<sup>58</sup> Observation of exercise and field operations will also be conducted to validate the findings in this area. Initial findings modeled on European and NTC scenarios show the following:

- MCCDs affected dynamics, not battle outcomes.
- Outcomes would be affected *if* MCCD created opportunities were exploited.
- Operations-based deception can be modelled but require player training, flexible scenarios, and analyst sensitivity.

More directly the initial JANUS findings show the following points of interest:

- MCCD use increased detections and firings by both forces (Red and Blue).
- Red detections and firings at real Blue systems were the same with and without MCCD's.
- MCCD's had less impact on Blue losses, greater impact on Red losses.

Not reflected above is the time sensitivity of the Red detections. As engagements run through longer, MCCD's lose effectiveness *overall* at about 10 minutes into the engagements.<sup>59</sup> The increased firing might deplete Red ammunition reserves and severely tax their logistics systems back to their supply base. The decoys

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<sup>58</sup> This effort appears to be focused on the M1 Tank decoy but will presumably account for the other MCCDs currently in the inventory and projected downstream.

<sup>59</sup> The simulations were run for 28 minutes total with 600 detects possible. Differentiation began at 5 mins climbing steeply for the next 10 minutes, then relatively flat to 28 minutes.

also appear to work well in terrain not suited for armor employment. The simulations show that high Red engagement rates are terrain independent.

Finally, they address the major issue outstanding in the U.S. Army regarding this area. The other capstone "doctrinal" publications, such as FM 90-2 and FM 101-5, preceded FM 100-5 and are thus in need of an integrated revision. The major implication with this facet of the problem is who should be responsible for its integration throughout the Army. The Chief of Staff of the Army answered that with the Deception White Paper reviewed next.<sup>60</sup>

*The U.S. Army White Paper on Deception (May 1989).*

White Papers are used by the senior civilian and military leadership of the Army to provide focus and direction on major issues ranging from the annual Army theme to establishment of new forces and doctrine. This White Paper was produced by the Intelligence Directorate in the Office of the Deputy Chief of Staff for Operations (ODCSOPS-FDI) at Headquarters, Department of the Army. The paper's intent is to present the vision for development and integration of battlefield deception into U.S. Army doctrine. The paper addresses: 1) the need for development of a comprehensive doctrine, 2) the integration of deception into all U.S. Army operations, 3) the manning and location of the Battlefield Deception (BATT-D) cells, and 4) fielding and use of the MCCD. The paper is not well written from a technical standpoint, and is thus difficult to read and understand. The points included are

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<sup>60</sup> Department of the Army White Paper, Operational and Tactical Deception, (ODCSOPS-P (DAMO-FDI)), 15 May 1989.

important, however, and represent the future vision for deception in the U.S. Army.<sup>61</sup>

The White Paper begins with the statement that, "The U.S. Army deception and survivability program requires modification in order to fully meet the goal of coordinated and credible deception operations."<sup>62</sup> While not as assertive as it might have been, the reader should keep this in mind; *the program is in need of modification*. This is absolutely correct and is the leading premise of this paper.

The documents referred to as a program are the field manuals and technical manuals governing operations (FM series 100 and 101), OPSEC, camouflage, cover and concealment, and the affiliated equipment and personnel programs now in various stages of development. This White Paper is one facet of that process.

The first issue in the paper is, the Army needs a comprehensive doctrine for deception. Currently the capstone document of FM 100-5 does not include a clear picture of where deception fits among the tenets and imperatives of the Airland battle. Related documents such as the operations manuals for corps and division, staff operations, and others predate FM 100-5 and FM90-2 and must be rewritten.

The effort to correct the doctrinal shortfall has begun. Proponency for deception was moved to the Combined Arms Center in December 1989. The upcoming revision of FM 90-2 will be released in 1992 reflecting the current work being done by the Arroyo Center and others on this issue. The bureaucracy of

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<sup>61</sup> This author conducted a personal interview in December 1989 with the personnel from ODCSOPS-FDI who authored this document and worked it through the Army Staff.

<sup>62</sup> Deception White Paper, p. 1.

doctrine development appropriately makes this a protracted procedure. The decisions that place responsibility for this development are in place and the next two to three years should find the capstone "warfighting documents" aligned.

The second point is the issue of integrating deception into all U.S. Army operations. This process has begun. It is now a *topic of interest* (author's emphasis) in BCTP, NTC, JRTC, and the ARTEP. The War College (Carlisle Barracks) and the Command and General Staff College have both included instruction in deception in their curriculum.<sup>63</sup> These points do not directly address the issue of integration. Examples given in the paper speak to task force level simulations and NTC experience. This is not where deception is integrated. The historical examples are more appropriate, showing operational and strategic focus, where time and resources combine to provide the basis for powerful, *fully integrated deceptions*.

Next is the issue of the BATT-D cells and the appropriate level of manning for them. The White Paper states that the BATT-D at the division should be reduced, leaving perhaps 5-7 personnel (currently divisions have 19), and the excess placed at the corps. This would give the corps a significant body of personnel capable of far greater planning and operational action. In addition this approach would allow the corps to provide deception support (in general or direct support) to their subordinate units according to the need. The paper includes a request that the force developer provide secure communications to the BATT-D at all levels. This would correct the original miscalculation that failed to provide them originally.

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<sup>63</sup> Michael Handel, the author of the second work reviewed in this chapter is a member of The Strategic Studies Institute and lecture at the US Army War College. His efforts have resulted in several conferences and publications on this subject.

The final major point treated has to do with the issues surrounding the decoy systems, or MCCD. These devices, as currently fielded provide dummy helicopters, fuel drums, 5 ton trucks, tanks, and personnel carriers (M2). The original funding for the devices issued did not come from units. They were funded by Department of the Army. This paper establishes (in general) the concept of proponenty based upon the unit that "benefits" from the device. That implies that it will be the Infantry Center, Armor Center, and Aviation (and so on) that are responsible. As worded it could be corps, or specific combat support or service support elements in the corps or divisions. This needs to be fixed. The paper states the responsibilities assumed by these centers will include the development, procurement, training, and doctrinal implementation for the devices. An unpopular and unfunded concept.

An affiliated discussion regarding the MCCD involves the fact that "many critics of Army deception programs seize on the decoy or materiel issue to point out the lack of doctrinal application."<sup>64</sup> Here the paper presents *tentative* results of simulations on the JANUS system that show several positive effects of decoy use in *simulation*. The decoys tend to draw fire as they are acquired by red force vehicles and engaged. Red force uses more ammunition (with logistic implications) and kills fewer blue force vehicles. This last is attributable to two mutually related issues: 1) engagements of decoys result in fewer actual firing on blue force vehicles, and 2) these firings increase accurate acquisition and engagement of red force vehicles. An elegant solution, but again, only in simulation at this point.<sup>65</sup> The central issue is that decoys

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<sup>64</sup> Deception White Paper, p. 2.

<sup>65</sup> Colonel Richard M. Swain (Director, Combat Studies Institute) reviewed the paper for the Deputy Commandant of the Command and General staff College, and made the following comments regarding the simulation data. "Most computer models, and I have no reason to believe JANUS to be any different, require a pre-execution engagement instruction (decision/action criterion) which is then executed through the simulation. That severely limits

are only a part of deception. The critics must understand that deception is a system applied with other battle field systems to achieve an effect.

The paper emphasizes that Soviet *maskirovka* is a holistic system, fully integrated at every level into the operations of their Armed Forces. What it does not say is that this integration produces a deception system that is second nature to the Soviet, just as OPSEC has become second nature to the U.S. Army in the last 10 years. Their system produces an armed threat that defies simplistic forecasting or templating.

The paper included a number of recommendations that are presented here to show additional detail to the elements covered previously:

- Commanders should be prepared to sacrifice 10% of their available combat power to the deception effort.<sup>66</sup>
- Doctrine development should be transferred from Fort Huachuca to Fort Leavenworth (CAC).
- Review doctrine and determine the target, goal, and means appropriate to the U.S. Army. Include Joint Operations in this assessment.
- Solicit field input on this issue to improve and update doctrine.
- The Combined Arms Center should be responsible for gathering and maintaining such data."<sup>67</sup>

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the conclusions." (USACGSC (CAL), Memorandum, 1st End, Operational and Tactical Deception, 5 July 1989).

<sup>66</sup> The word sacrifice denotes assets lost to deception duties and not the actual loss or death of personnel. Mr. Cabbage points out that a better view is that this investment of force will pay a dividend of strength exceeding 10%. (Source, Personal Correspondence, April 1990)

<sup>67</sup> The decision was subsequently made to place responsibility for doctrine development in the College in the Center for Tactics (CTAC) with CATA responsible for issues of integration throughout the Army.



### *Consideration of the Interviews.*

This section will provide a brief overview of the major interviews conducted in the preparation of this paper. The author will attempt to place the interviews in context and to introduce the key points that emerged in the author's opinion. Readers are encouraged to review the three transcripts that are attached as appendices.

Senior General officers who have been instrumental in the development of Army doctrine, strategy, or its implementation were approached for interviews. Key among these were General Donn Starry, General Richard Cavazos, General William Livsey, and Dr. Edward Luttwak. In addition to these respected experts, the author also approached a number of other officers and scholars using the interview technique to capture their experience and insight into the deception problem. The most senior of these gentlemen were involved in the evolution of U.S. Army doctrine from the late 1970's to the present. As commandants of the Infantry and Armor schools, and as Commanding Generals in virtually all of the Army's warfighting commands they brought specific and needed expertise to the interviews.

### *General Cavazos (Appendix A)*

An experienced combat leader and commander, General Cavazos was also central to the development of the 1986 FM 100-5. The general had given the issue of deception a great deal of thought. Most recently, as the senior advisor to the Battle Command Training Program (BCTP), he has witnessed the actions of virtually all of the Army's warfighting leadership at the corps, division, and brigade levels.

Cavazos makes two key points. The first is that deception must be central to the plan, not added onto a plan after it is conceived and roughed out. He takes this

further by suggesting that effective deception operations often call for risk taking where the success of the overall operation hinges on the deceptions success. Rommel's action at Bengasi in 1941 is an example of such an action. Rommel devised a plan that required the British to believe he was evacuating from Bengasi. To convince the British of that intent, he blew up his "ammunition" ships. The British who dropped their guard and lost an opportunity to trap the Desert Fox allowing his breakout. Had the ruse failed it is likely the breakout would have failed as well.

The second point he made was that the sub-optimal course of action is the best course to adopt if you wish to deceive. The optimal course will likely be identified as such by an able enemy, thus limiting your options. The sub-optimal course of action is unexpected, against the weakness of the enemy, and requires the greatest initiative from the attacking force.

Cavazos commented on the nature of strategy. Cunning and guile he sees as the essence "generalship." He said, "Cunning is a concept. Guile is the fooling of people, they go hand in hand. Guile is bewitching somebody, cunning is the clever concept of operation you work so brilliantly on concepts of operation."

There are interesting observations on leadership and the role of the leader in warfare. He says of the brilliant leaders, "We like them all when they do it. We like the Rommels of history, the Pattons of history. Then we have the old bread and butter, half-slipped poor commanders. A very methodical kind of guy, he ain't foolin nobody, he just fires correctly and succeeds. And yet General Worth, when the 4th Army went around Metz, had a very fine deception...

He also emphasized that deception can be decentralized and conducted at many levels simultaneously. Some care must be given to preventing one deception at a lower level from undoing another. He says, but it can be totally different in the form their deception takes.

### ***General Starry (Appendix B)***

As one of the chief architects of the 1976 and 1982 operations manuals, General Starry has a deserved reputation as an innovator in maneuver and command and control. His views on deception and surprise were eagerly sought. He felt that deception planning was best done centrally by a small staff, very carefully controlled and with limited access to all phases of the deception. One concept he forwarded would have the staff develop two complete plans from which the commander could then chose one for execution. This approach and the limited access would provide virtually inviolable security *prior to* the initiation of physical actions.

While commanding V Corps in 1976, he remoted the Corps operation center. This included creation of a simulated complex "remoted" from the communications node. Additional measures included the scheduling of shift changes and traffic to avoid overhead surveillance schedules by satellite platforms.

A good deal of his lengthy discussion centered on the possibilities and potential presented by the emerging technologies of artificial intelligence (AI). There are security and C<sup>2</sup> implications. There followed consideration of the role of intuition to intelligence assessments and the difficulty of building intuition into artificial intelligence. As an example he cited the forecast of the Battle of the Bulge by the 3rd

Armor Division G2 (Koch). How and why Koch "knew" is as mysterious now as it was when his advice was dismissed.

Deception is best done by finding "some clever zealot, who is good at cobbling up stories." An example of one such "zealot" concerned a Lieutenant Colonel Abrams. In 1949 Abrams (with Captain Starry as one of his Armor Company Commanders) worked a simple and successful tactical deception. As aggressors against one of the division's brigades the unit occupied a defensive line in the woods in preparation for an attack the next day. The brigade was arrayed two up, one back prepared to respond to the strength of the attack. Abrams put a portion of his force to the business of moving and refueling along the edge of the woods. All night the clanking of Jerry cans and repositioning of M-24 tanks continued. The brigades' scouts reported the activity and the Brigade Commander brought his reserve up into the line ready to stop the impending attack as it crossed the line of departure. The Brigade Commander was naturally surprised, when at first light Abrams' force attacked with nearly his full force into the exposed rear of the brigade.

***Dr. Luttwak (Appendix C)***

Dr. Luttwak has written and consulted to the Department of Defense and the U.S. Army for years. His contributions to strategy, organization, and force structure have been important and have helped shape the military force the United States employs.

Luttwak sees the issue of culture as a critical factor in an Army's ability to practice deceptions. By this he refers to the entire milieu of pressure and influences that surround and support the society. He questions whether deception might be

antithetical to the requirements of a free society such as that of the United States. He does not discount the teaching of such techniques completely, but cautions the difficulty and rapidity with which it might be accomplished.

He said that "common sense is the enemy of deception." From this unique perspective he examines the concept of the enemy's perceptions. Common sense on the enemy's behalf makes some deceptions virtually impossible, unless one can convince the enemy that it is true. That proof is usually an inefficiency of sufficient magnitude to convince the enemy of something extraordinary. "Every act of deception involves a willful inefficiency inflicted on oneself for the sake of doing the unexpected and surprising the enemy."

He talks about routine and discipline as related to cultures and the security deception requires. He tells about regimentation of the Soviets in Afghanistan and General Dozier in Italy that both resulted in dire consequences. The best example is that of the Israeli Paratroop Battalion interdicting infiltration across the Jordan River. They focused on systemic routines, who comes, when, to where, with predictable patrolling and ambushing at predictable times and places. "The Israelis looked like an encampment of ruffians. Soldiers were shackled up, Army girls upstairs, tin cans lying around. In this unstructured environment, planning occurred based on intuition and recent experience. The officers and soldiers were freed from the regimentation and restrictions of standard procedures. This proved successful for them.

Luttwak also talked in some detail about the dynamics of the Soviet resurgence in mid-1942. Even as they continued in the defense, the seeds of their deception-based offensive system was fashioned. Their procedure oriented approach (opposed

to the goal orientation of other systems) works by its pervasiveness, not by its efficiency.

### ***Brigadier General Clark***

As one of the key people in the development and implementation of the BCTP program General Clark has seen and worked with all the Armys' current senior leadership. He believes that deception must be integrated into the plan "top to bottom" to support the commander's intent. In his view, the role of supporting assets is key to deception. He has witnessed numerous attempts to deceive undone by the failure to position supporting artillery or logistics appropriately.

Clark sees similarities in the challenge of deception relative to the other elements of combat power. It requires synchronization [integration] by commanders and staffs. To accomplish this, he suggests that deception be included in the estimate process. In that way the commander can be apprised of the opportunities available and provide timely guidance regarding those opportunities as part of the planning process.

### ***Conclusions.***

There is a great deal of detailed information available on deception, its conduct, and its impact or effect on the enemy. The pattern that emerges from the data presented is emphatic. Innovative and aggressive adversaries use deceptions, in all their rich variety, to achieve surprise. Arrogant or defeatist adversaries are baffled, beguiled, and ripe for exploitation by deception. The over aggressive opponent who will always move directly into the attack to strike hard and decisive blows can be trapped by his own aggression. Deception becomes what Cubbage describes as the

ultimate "mental *ju-jitsu*," where an opponents inertia is used against him.<sup>68</sup> At rest he is liable to the application of force (or not) and in motion his movement can be used to place him at disadvantage.

Strong forces use deception. Weaker forces use it as well. It appears to be primarily offensive, but has strong defensive components. It is related to the principles of maneuver, mobility, and agility. But can be used to ensnare a mobile enemy by misdirection and interruption of tempo. It can produce movements or paralysis. One consistant element can be associated with deception and the units that practice it. That is success. Commanders and armies that succeeded in protecting their nations, appear to have used deception as a combat multiplier.

The four major points included in the Army White Paper will be used to help frame the argument in the ensuing chapters of this paper. The doctrine and integration of it is the single largest impediment to a potent and successful battlefield deception program that is the goal of the U.S. Army. Keep these points in mind as we review the historical examples in the next chapter.

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<sup>68</sup> T. L. Cabbage, in personal interview. This term perfectly describes the advantage one gains by deception. By imbalancing your opponent the aggressor can *momemtarily* gain an initiative that can only be decisive *if* the following actions are decisive.

## Chapter 4

### Deception in History

*The high proportion of history's decisive campaigns, the significance of which is enhanced by the comparative rarity of the direct approach, enforces the conclusion that the indirect is by far the most hopeful and economic form of strategy.*

B.H. Liddell Hart  
The Decisive Wars of History

This chapter will examine three deceptions in the history of warfare. They are, in order, the Third Battle of Gaza (WWI), the Soviet breakthrough at Kiev (WWII), and the 1973 Arab-Israeli War. These particular examples are chosen to illustrate various aspects of deception as they relate to the modern era and, of particular interest, their probable relation to the future of deception. The list is not exhaustive and does not cover every conceivable type of deception. It attempts to show the reader the potential of deception as a force multiplier and as a constant in modern warfare. All of the elements of "modern" intelligence collection capabilities are included in these examples. In each of these overhead reconnaissance was critical, just as it is today.

The saga of the World War II deception effort culminating with the Normandy invasions is not included here. The mastery of the enemy code system and the sheer magnitude and time frames involved place that effort in a very special category. That is not to say that there is not much to learn from that deception, but only that the examples used here are smaller and less complex representing archetypes with a higher probability of occurrence in the future.\*

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\* Suggest that the reader see Cubbages' article in Intelligence and National Security on the Hesketh report, regarding Garbo's message, pp. 334-335.



First, the Third Battle of Gaza shows how deception can be used *even* when the enemy is predisposed not to believe your deception. As previously discussed, an enemy predisposition to believe your deception scheme makes the job much easier.<sup>69</sup> This factor is emphasized because of the relative frequency of situations where attacks and supporting attacks must proceed in obvious ways. Deception becomes difficult in the extreme, but not impossible, when working *against* enemy preconception in attempting to convince them of another case.

General Allenby showed it to be possible at Gaza. Other factors can come into play, as they did at Gaza, such as the internal politics of the enemy (the German "advisory group's" control over Turkish operations, for example). Three critical factors of interest single out Third Gaza as an example. First, the famous "Haversack Ruse" was used to successfully pass false and misleading documents to the enemy force second, it shows the relationship between risk and deception with some clarity; and third, the operation included the use of a weapon in an unorthodox manner to achieve surprise. This was the use of the Australian Light Horse as cavalry and not in their doctrinal mounted light infantry role. This last point is a somewhat obscure component of Soviet *maskirovka* that is rarely illustrated but should not be overlooked.<sup>70</sup>

Second, the Russian breakthrough at Kiev is an interesting example because the technique used has become central to Soviet *maskirovka* operations. At Kiev it is seen early in the development of *maskirovka*. It is not the first operation of its kind,

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<sup>69</sup> Cubbage, T. L., "German Missapprehensions Regarding Overlord: Understanding Failure in the Estimative Process," Intelligence and National Security, (Cass, London :July 1967),p. 146.

<sup>70</sup> Glantz, pp. 7-8.

nor the largest, but it amply displays the Soviet penchant for the secret introduction of overwhelming force into an unexpected sector.

The third, and final vignette deals with perhaps the most widely known example of deception. The Egyptian deception in the 1973 Arab-Israeli War is unique in many ways. Its primary point of distinction has to do with the limited political goals on the part of the Egyptians being dismissed out of hand by the Israelis. This factor made the unthinkable course of action, not only attractive, but practical. This example also demonstrates the synergism between several types of deception when they are applied together to a common purpose.

All of the examples presented here are brief. They are not intended to give the reader facts available in other source materials. They are, instead, intended to provide the framework for a practical discussion of deception against a real-world scenario. Readers are encouraged to consult the referenced sources for more detail.

### ***The Third Battle of Gaza (31 October 1917)***

The Turkish lines stretched about 60 miles from the coastal city of Gaza (Palestine) along ridgelines southeast to the vicinity of the ancient oasis settlement of Beersheba near the Jordan River. The Turks had occupied this line after being pushed out of the Sinai in January 1917. Their strength was about equal to that of the British in the area of Gaza with outposts toward Beersheba. See figure 8.

General Archibald Murray was the British Commander in the Middle East. His units first attempted to capture Gaza and the route to Jerusalem by frontal attack on 26 March 1917. Communications and coordination problems, as well as the

approximately equal force ratios caused this attack to fail.<sup>71</sup> General Murray reported to London that the attack had been successful in weakening the Turkish defense.<sup>72</sup> He was ordered to attack again to seize the route to Jerusalem.

Three weeks later, on 17 April, the allies attacked Gaza a second time . The Turkish positions were much better prepared and the frontal assault was defeated with about 6,500 allied losses. The Turks lost even fewer men this time, losing only about 2,000 total. The loss resulted in the relief of General Murray who was replaced by General Sir Edmund Allenby, whose "first step was to move British headquarters from Shepherd's Hotel in Cairo to the fighting front."<sup>73</sup> He insisted on additional forces and built his strength to around 88,000 men.

Allenby conceived a deception based plan to accomplish the ultimate mission of capturing Jerusalem. He decided that capture of the garrison at Beersheba to turn the Turkish flank stood the best chance of success at the least cost in allied combat power. His additional forces gave him only a marginal numerical advantage of 10 allied divisions to 8 Turkish divisions. The operational deception plan employed what Handel calls the *double bluff*, where the attack at Beersheba was to be portrayed as a deception to cover yet another frontal assault to seize Gaza.<sup>74</sup>

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<sup>71</sup> The two forces totaled about 16,000 men each with the British taking about 4,000 casualties against the Turks 2,400.

<sup>72</sup> Depuy, R. Ernest and Trevor N., The Encyclopedia of Military History: From 3500 B.C. to the Present, (Harper & Row, New York:1986), p. 973.

<sup>73</sup> Ibid, pp. 973-974.

<sup>74</sup> Handel, Michael I., "Introduction: Strategic and Operational Deception in Historical Perspective", Intelligence and National Security, (Cass, London: July 1967), p. 7. Handel uses this term to describe the situation wherein even upon discovery of the attack (or preparation) at Beersheba, the story is not undone since it includes a "strong feint" at that wing. The enemy

Allenby's major problem was logistics, specifically the provision of water to his men and their animal mounts. Ammunition and provisions, while also important, were secondary to the larger problem of water. He would have to reroute water and rail lines towards Gaza over rough terrain. The movement to, and capture of Beersheba could not take more than 48 hours, and *bad* to capture the water wells there intact or risk significant losses in horses and men.

The foundation for this plan was the continued "preparation" of the area around Gaza. The camps adjacent to Gaza were gradually emptied of forces, but "activities" continued in the camps 24 hours a day. False supply dumps were positioned to simulate ammunition, fuel, and water stores. The pipeline and associated transport activity was continued there. Landing craft and warships were brought in to simulate preparations for amphibious operations. This included a strategic component to the deception, with troops, dummy camps, and wireless traffic portraying the buildup of an amphibious landing force on Cyprus.

At the same time a series of messages (clear text and encrypted) was released informing units that because of General Allenby's leave in Cairo no major actions would be undertaken prior to the General's return on 7 November. Reconnaissance was continued toward Beersheba on a routine basis. In the words of A. P. Wavell, an officer on Allenby's staff (he would become a distinguished General Officer and practitioner of deception in the WWII):

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then is paralysed as he continues to wait, for what he is sure will be, the main attack at Gaza. (The author found that this as a strong component of many deceptions throughout history).

These reconnaissances served a double purpose. Their constant repetition suggested to the enemy that our efforts in this direction were confined to demonstrations; it was hoped that the real attack on Beersheba would gain the advantage of surprise by being mistaken at first for another reconnaissance, an impression to which our intelligence service adroitly insinuated at the right moment by cipher wireless messages which were meant to be read by the Turk. Secondly, these periodical advances toward Beersheba provided a screen under cover of which commanders and staff became acquainted with the somewhat intricate ground towards Beersheba and worked out their arrangements for the approach to and assault on the Turkish works.<sup>75</sup>

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<sup>75</sup> Wavell, A. P., The Palestine Campaign, (Constable, London: 1936) pp. 106-7.

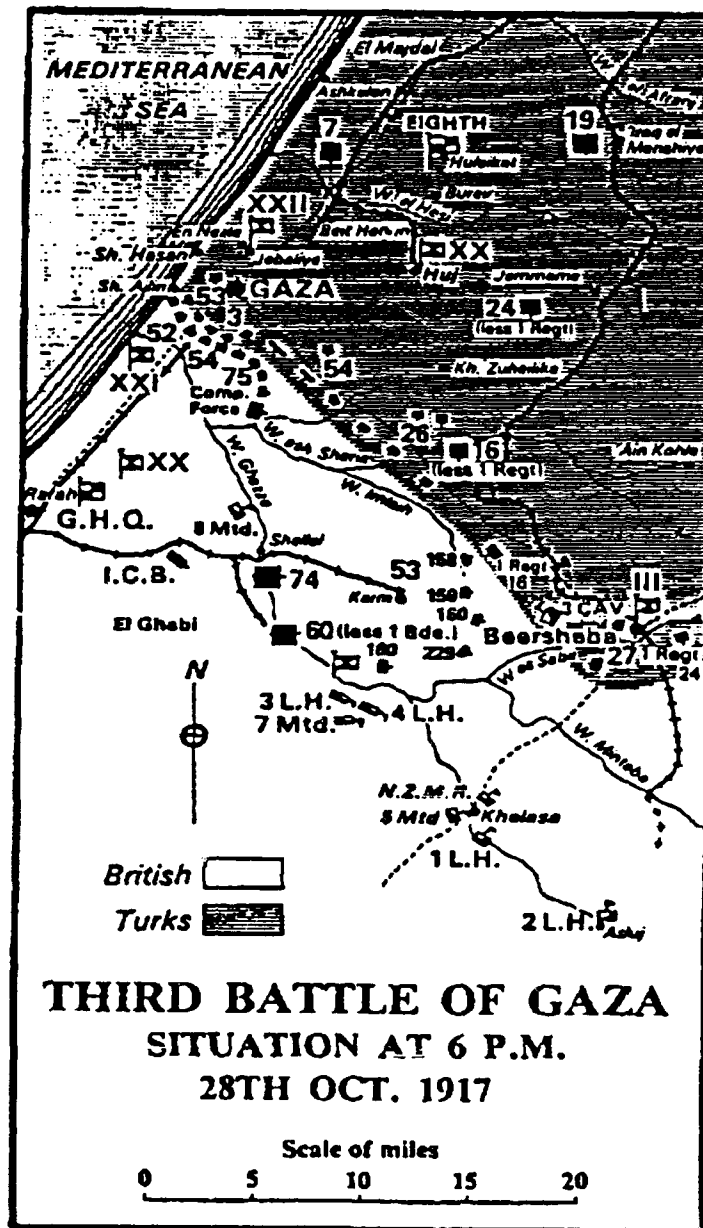


Figure 8. Third Battle of Gaza. 1800 hours 26 October 1917.



Figure 9. Third Battle of Gaza. 1800 31 October 1917.

To further foster this perception, Allenby's intelligence officer, Major Richard Meinerzhagen developed and executed what has come to be known as "Meinerzhagen's Ruse."<sup>76</sup> The ruse involved the intentional loss of an officer's dispatch case during a reconnaissance toward Beersheba. The case included maps of the "plan" (including a fictitious amphibious phase), an officer's notebook complaining of the logistic difficulties of supporting a feint toward Beersheba and that no solution had been found to remedy them, private letters complaining of the transparency of using a feint toward Beersheba, some money, and a very personal letter written by the "officer's wife." The letter was, in fact, written by a British nurse in Cairo at the dictation of Meinerzhagen. The letter informed the officer of his child's birth and the love and loneliness of the wife. Along with the letter were telegrams to the officer announcing the birth and a copy of his congratulatory telegram to her. Meinerzhagen himself is said to have thought the letter and the telegrams as one of the essential elements in the success of the ruse.

Ten days prior to the attack (21 October) Allenby's forces began preparations for their movements east to Beersheba. They worked secretly at night and took refuge in covered positions during the day. The water pipeline and the railway were continued to about 20 miles from Beersheba.

Shelling began at Gaza a week prior to the attack on 24 October. In the days before the assault, as troops moved east, contract Egyptian laborers were loaded onto

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<sup>76</sup> This is alternatively called the "Haversack Ruse" and is often confused with a similar operation undertaken in the Middle East in WWII regarding the El Alamein "going maps." (See Chapter 3, p. 35).



ships and unloaded at night and marched in and out of the camps near Gaza. Anti-air coverage was loosened in the vicinity of Gaza and complete air superiority imposed toward Beersheba allowing the Turks some access to the picture being portrayed.

D-Day (31 October) began with attacks by elements of the XXI Corps upon a portion of the defenses at Gaza. Then commenced a five hour shelling of Beersheba. The Australian Light Horse Infantry then conducted one of the last successful cavalry charges in history.

The Turks were experienced in fighting the Australian mounted infantry, who normally dismounted in skirmish line at the maximum effective ranges of their rifles to begin the dismounted assault. This procedure gave them the advantage of using their machine guns, mortars, and artillery during the advance. An additional advantage was their ability to refine their knowledge of the defense and react accordingly. On this day they did not follow their normal pattern of operation, but instead, rode hard from about 5,000 meters directly under the ranges of the guns and into the defense. The shock of this move coupled with the artillery strength and higher than expected force ratio carried the day for the Australians.

Despite the growing indications of overwhelming forces near Beersheba as well as the discovery that many of the Gaza camps were actually empty, the German-Turkish command did not divert forces to Beersheba. Their preconception of another attack at Gaza and the convincing nature of the Haversack Ruse and the other components of this deception prevented accurate assessment of the intelligence data to the contrary.

Accounts vary on the details within the German-Turkish command. The Australian film on the subject entitled "The Lighthorsemen" mirrors the accepted version of the effect of the deception.<sup>77</sup> The Turks did not accept the "evidence" and vigorously demanded reallocation of forces to reinforce the Beersheba garrison. The German General, Kress von Kressenstein, thought the documents accurate and saw them as convincing proof, along with the other indicators, that Gaza remained as the British target. General Kressenstein is thought to have been particularly impressed by the personal details included in Meinerzhagen's haversack.

Despite the fact the wells at Beersheba were prepared for destruction, they were captured generally intact. After nearly 50 hours without water (except each man's individual ration) Beersheba fell to the allies and the defense of Gaza was unhinged.<sup>78</sup> The Turks fell back approximately 60 miles to defend a line north of present day Tel Aviv east to the Jordan River. Almost one year later Allenby would feint to the east of that line and penetrate the Turks frontally in the west at the battle of Megiddo, in the exact reverse of Third Gaza.

### *Analysis*

This is an elegant example of battlefield deception. Allenby entered the theater and took the initiative. He was an unknown element and, as such, he destabilized the situation. Allenby knew this and capitalized upon it. The basic options available to

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<sup>77</sup> The film credited the unit histories of the British, Germans, and Turks. Also the memoirs of Allenby, Wavell, and survivor interviews of the Australian Light Horse who participated in the action.

<sup>78</sup> General Cavazos refers to Beersheba as "the hinge." The allusion, attributed to Allenby, is that of Gaza being the door to Jerusalem. Since they could not get in by the door [Gaza], they "took the door off the hinges."

him were to make a third frontal assault on the Turkish works or find another more successful way to get to Jerusalem.

Stated in this way Beersheba becomes an obvious target. Another option was to pierce the Turkish lines east of Gaza and turn the defense in that manner. That would have exposed his logistics structure, put him into difficult terrain, and exposed two flanks. There was the potential for an amphibious assault north of Gaza (which was used in the deception), but Allenby did not really possess the forces for such an operation. Such a maneuver would have left the area before Gaza bereft of sufficient force to hold that line. The only viable alternative was to take Beersheba using deception to portray sufficient strength elsewhere to hold the line.

Examination of this deception using the deception hierarchy proposed in Chapter 2 reveals the figure below. Each of the categories was exploited to provide a balanced picture of convincing clarity and complexity. Each element combined with the others to provide just enough dissonance to appear authentic. Let us look at this deception through the filters of situation, cost, risk, and benefit to see if there are other perspectives of interest within it.

<b>Cover/Concealment</b>	<b>Disinformation</b>	<b>Diversion</b>
Night withdrawals	Allenby's absence	Gaza camps "normal"
Pipeline/Rail effort	Dummy movements	Attack prep (Gaza)
Troop movement east	Haversack documents	Routine patrols (east)
Air cover (east)	Air access (west)	Dummy sites (Cyprus)
Information Security		Amphibious assault

Figure 10. Here Gaza is cataloged by function using the author's proposed deception hierarchy .

**Situation.** As noted above, another frontal assault was not appropriate. Another course of action was required to break the defense of Gaza. Without large quantities of additional artillery, air, and ground assets, there was no obviously assailable weakness in the Gaza defense. A rethinking of the situation was required. That is what Allenby's arrival brought to the battlefield. He saw the alternatives and chose one that met his criteria of cost-risk-benefit.

**Cost.** The plan developed by Allenby and his staff required significant staff and supervision effort.<sup>79</sup> That explains, in part, the six month delay between second and third Gaza. The additional forces Allenby requested and received were required in the case of another frontal assault on Gaza or for any other course of action, and as such are outside the cost equation here. What did the deception in the Gaza area cost in resources? The XXI Corps elements (52d, 54th, and 75th Divisions) remained in place and provided the stabilization of situation portrayed in that sector. The ultimate movement to the east of XX Corps could be viewed as a cost of the plan. This took the major reserve out of the Gaza sector. The use of British warships to bolster the amphibious aspect of this plan did, undoubtedly, divert them from other potential duties. This cost was apparently deemed acceptable. The cost of the constant air cover distinctly targeted to support the deception is difficult to quantify, but can be included in this discussion as a cost of the operation.

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<sup>79</sup> The author could not find proof of the extent to which this plan was attributable directly to Allenby's staff or to General Allenby himself. The impression one receives is that the major elements of the plan were Allenby's. The "Haversack Ruse" appears to have been Meinerzhagen's idea, with the personal permission and assistance of Allenby.

The costs in materiel of constructing additional rail and pipelines toward Beersheba did not measurably strain the supply capability of the British, neither did it require reallocation from other projects. The financial costs associated with the hiring of the Egyptian laborers and the construction of decoy sites on Cyprus were not excessively expensive and did not call for new spending priorities. In short, the costs of this particular course of action, as opposed to the other available options, were minor. With the exception of no major reserve positioned in the Gaza area after about 20 October, there were few other manifestations of overextension. In fact the utilization of forces show efficiency and economy with a margin of safety (XXI Corps) as well. One possible cost was the fact, that by turning the Turks out rather than defeating them, Allenby still potentially had that particular fight before him.

***Benefit.*** The obvious benefit was victory over a warned, determined, and well prepared enemy, of relatively equal strength. The plan used the enemy preconception (admittedly aided by the 11,000 allied losses) of Gaza as the center of gravity for the British. By accomplishing what was essentially a turning movement, Allenby gained positional advantage without undue cost. The parliament and the Prime Minister were already nervous about the losses, as evidenced by General Murray's relief, and this plan benefitted by avoiding the kinds of engagements that produce major losses.

***Risk.*** The movement of forces east risked prompting the Turks to attack south to spoil the attack. The new rail and pipelines to Beersheeba risked discovery and interdiction and the potential undoing of the plan. The *double bluff* works against this eventuality. Discovery of such activity could have easily been

regarded as only that required to support the feint. Turkish intelligence would have had great difficulty devining the exact requirements of an theoretical feint against Beersheba. By taking six months to prepare this operation, the British risked discovery by allowing time for the Turkish and German Intelligence systems to discover the actual intent of the activity that was observable and reported to them. The Egyptian civilians represented a substantial risk. Their observations of empty camps, on and off-loading ships that went nowhere, and other such indicators could easily have been divulged. Overall, the risks undertaken by Allenby in execuung this plan were minor. Discovery of the plan could have been managed. Was the risk of this operation less than the risk of major losses in another attack on Gaza? The histories of this event suggest that they were. To summarize the points of the cost-benefit-risk discussion the table below is presented:

Cost	Benefit	Risk
XX Corps Movement	Success	Empty camps
Pipe/Rail Lines	Avoided strength	Egyptian workers
Egyptian laborers	Positional advantage	Pipe/Rail lines
Air cover/warships	Lowest cost (lives)	Loss of Surprise
Preparation time		XX Corps Movement

Figure 11. Analysis of the Third Gaza using the cost, benefit, risk parameters.

### *The Liberation of Kiev (3 November 1943)*

The encirclement and defeat of Paulus at Stalingrad in December 1942 was the beginning of the end for the Germans on the Eastern Front. The front was

temporarily stabilized by von Manstein at Kharkov. The Battle of Kursk, 300 miles east of Kiev, was the end of German offensive capability. The loss in men and materiel was disastrous to the Wehrmacht. The Germans withdrew west to the Dneiper River line and assumed the defense. Stalin ordered "...urgent measures to capture the Dneiper...to prevent the enemy from completely devastating...the area west of the Dneiper." The Germans, after two years of occupation were destroying anything of value.<sup>80</sup> The German defense and the Dnieper River itself presented the Red Army with a significant obstacle to the recapture of Kiev.

As Russian forces converged on the area south of the Pripyet Marshes, the only substantial bridgeheads controlled by the Red Army were south of the city at Bukrin and Mishurin Rog. The Voronezh Front (later renamed the Ukrainian Front) held these bridges, but had not been able to expand the bridgehead.

On 29 September the Voronezh front was ordered to sweep across these bridges with three armies to envelop Kiev from the southeast as another army conducted a supporting attack from the north across a minor and "small, swampy crossing at Lyutezh."<sup>81</sup> The operation, despite the commitment of six armies, failed. With German defenses focused on the region south of the city, the Soviets could not gain the initiative. However, in the north, the 38th Army had a small and quiet victory which left them with an acceptable bridgehead and apparently minor German opposition.

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<sup>80</sup> Zhukov, G.K., The Memoirs of Marshal Zhukov, (Jonathan Cape, London:1971), p.481.

<sup>81</sup> Glantz, p. 262.

Vatutin, the Ukrainian Front (now renamed) commander was granted permission to shift his main effort north to the Lyutezh bridgehead on 24 October. His request for an additional tank army was denied, so he decided to use the 3rd Guards Tank Army located south of Kiev to strengthen the effort in the north.. Vatutin's plan would continue "normal" operations at both bridgeheads, north and south. He would simulate renewed offensive operations in the Bukrin area. He would conduct the secret repositioning of the 3rd Guards Tank Army, the 23rd Rifle Corps, 4th Artillery Penetration Corps, and other minor units into attack positions near the Lyutezh bridgehead. The movement over the entire *200 kilometer* route would be accomplished using *maskirovka*.

Almost unbelievably, two days after the order was received, the movements commenced at 0300 27 October. Over the next seven days the movements continued in total silence. The weather closed in which facilitated the move, including some daylight movements. Where necessary, engineer smoke units augmented the weather to obscure the regrouping. The weakness of the Luftwaffe presence allowed virtually complete Soviet air superiority over the Kiev area.

Vatutin launched a devastating attack against an unprepared German Army on 3 November 1943. The attack pierced the German lines and drove southwest to Zhmerinka and Mogilev-Podol'sk, about 350 kilometers from Kiev. Within two days the Germans lines of communication had been interdicted. The southern attack had fixed forces near the Bukrin bridgehead. Defense of the Kiev sector disintegrated as the Germans commenced their strategic delay west once again despite having rushed another three armored divisions into the defense on 5 November.<sup>82</sup>

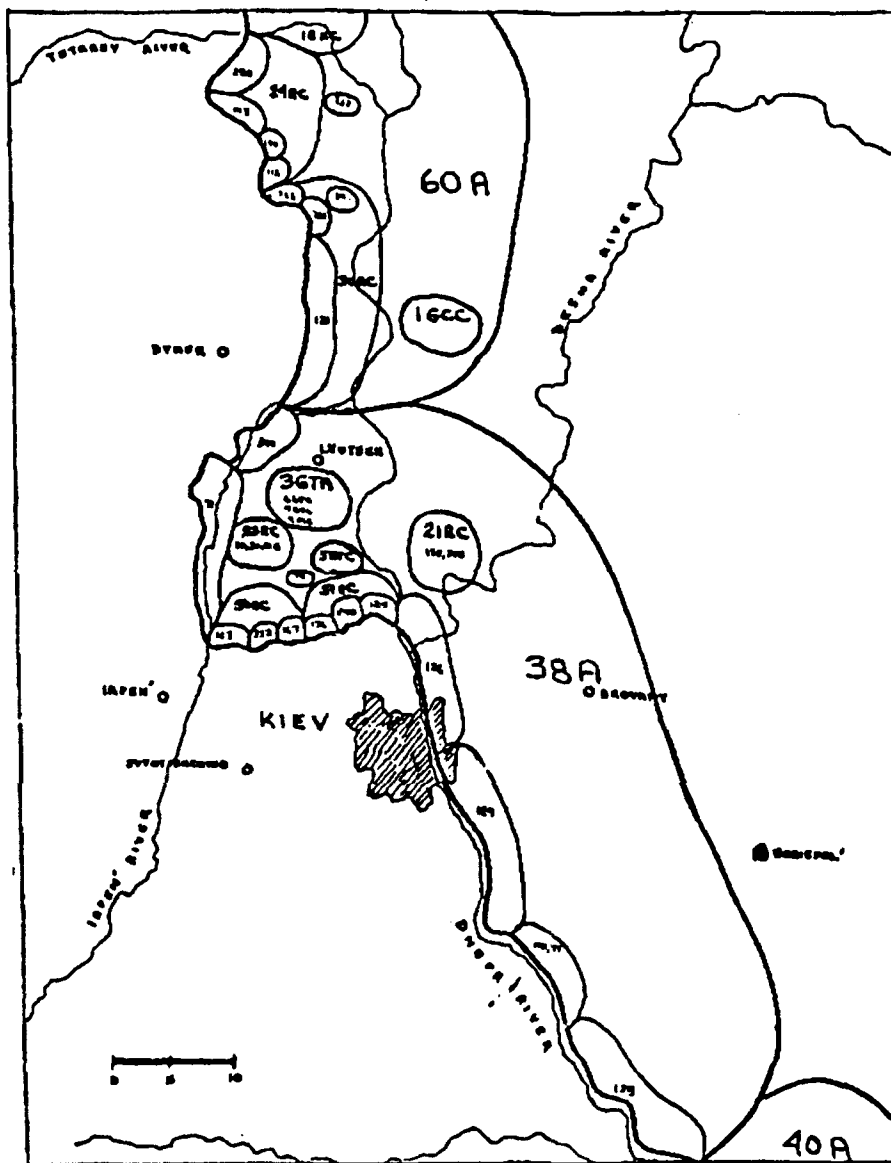
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<sup>82</sup> Manstein, Erich v., Lost Victories, (Presidio Press, Novato, CA: 1982), pp. 486-487.









**Figure 14. German intelligence estimate of Soviet dispositions 2 November 1943**

The Germans had actually discovered movement of elements of the 3rd Guards east of the Dnieper in the vicinity of Kiev, but did not know their actual size or intent. The German Eighth Army intelligence assessment of 31 October mentioned that movement, but assessed it as related to the "other tank units withdrawn from the Lyutezh area in order to be reconstituted." Another assessment in the same unit had forecast commitment of the 3rd "north of Kiev." It was dated 30 October 1943. Yet the German Armies before Kiev were totally and completely surprised. Glantz quotes General Manstein as having said: "It was not clear whether this was an offensive with far reaching aims or whether the enemy first intended to win the necessary assembly space west of the river." Glantz asserts that the Germans had under assessed the Russian strength by 40%, a fact attributable to the success of *maskirovka*.<sup>83</sup>

#### *Analysis.*

This deception shows how one can find the battlefield before him completely and devastatingly altered by an industrious and determined enemy. It clearly illustrates the interdependence of OPSEC and deception. The radio silence and use of night movements and dummy sites all provided the picture of "no change." This example also points out how disastrous negative intelligence, that is the absence of data, can be. In this case the Germans had yet to come to grips with the faults of their notoriously inaccurate intelligence system. They were willing to discount dangerous movement indicators with rumors (of questionable origin as we know). Most disastrously, they believed their position against the Pripyet Marshes made their left flank less dangerous.

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<sup>83</sup> Glantz, p. 296-270.

Cover/Concealment	Disinformation	Diversion
Night Movement	Mock-ups left in place	Patrolling bridgeheads
Radio Silence	Huts/fires at Lyutezh	Armor Reconstitution
Noise/Light Discipline	Radio traffic simulated	Supporting attacks
Augmenting Smoke	Armor Reconstitution	
Air Superiority	Zone defensive ruse	

Figure 15. Here Kiev is cataloged by function using the author's proposed deception hierarchy.

**Situation:** The Ukrainian Front converged into the Kiev area as a supremely victorious army. Recent successes at Kursk and Kharkov combined with their growing ranks, as new soldiers were conscripted from recaptured territory, to fuel their momentum. This juggernaut was pressed into the bend of the Dnieper River south of the Pripyat Marshes. Materiel and supplies were available as never before. Air superiority was virtually complete. Guarding the Dnieper was an enemy whose strength had been taken, whose replacement personnel were untrained, and whose equipment was in short supply and poor repair.

**Cost.** The Soviet force under Vatutin had sufficient forces for a main and supporting attack. The decision to use the least likely avenue helped to insure success at the lowest cost in combat power. That decision made the movement of the 3rd Tank Army (with their 345 tanks, 250 guns, and 4000 vehicles)<sup>84</sup> out of the southern sector without real cost. The Germans had insufficient forces in the area to be a serious threat to General Rybalko's forces in the area of the southern bridges. The recapture of Kiev, the control of the Dnieper River crossings, and their deep attack objectives to

<sup>84</sup> Glantz, David M., The Red Mask, (Cass & Co Ltd, London), p. 441.

the southwest put all front assets into a concentrated area with sufficient assets to achieve the missions in several possible ways.

**Benefit.** The indirect approach against the least prepared and weakest opponent exhibits an aspect of Soviet operational art not usually associated with their current doctrine. By insuring there was overwhelming force at the Lyutezh bridgehead as well as a potent threat in the Bukrin area, Vatutin insured success. His plan looked deep to the subsequent objective that would shatter the German defensive line west of the Caucasus Mountains. By using the Pripyat Marshes to his northern flank, he eliminated the German threat from that direction.

Cost	Benefit	Risk
3rd Tank Army (reposition)	Successful and efficient attack	Interdiction during the movement north
23rd Rifle Corps	Avoided strength	Enemy reacts (North)
4th Artillery Penetration Corps	Positional advantage against the marshes	Delay allowed more German preparations
Support Missions	Lowest cost (lives)	Weather clearing
Air cover		

Figure 16. Analysis of the Soviet's Kiev operation using the cost, benefit, risk parameters.

**Risk.** Vatutin took a risk to be sure, but not a terribly large or dangerous one. If the weather had cleared on the 29th or 30th of October *and* Germans could have reacted with aircraft and artillery in sufficient numbers, the 3rd Tank Army could have been interdicted. The Russians would have to have pressed the attack without the initiative or pulled off the river line and regrouped. The Germans had limited aircraft assets

that were focused on destroying the two bridgeheads.<sup>85</sup> Without a viable threat on his southern flank, Vatutin took a prudent risk.

### ***The 1973 Arab-Israeli War (6 October 1973)***

This war began, in a sense, at the end of the Six Day War in 1967. A defeated Egypt looked across the Suez canal to the occupied Sinai and Gaza strip and began the preparations that would reclaim it. The first of those preparations was the rebuilding of the Armed Forces. This included attention to new equipment from the Soviet Union, but also raising the size, morale, and capabilities of the Egyptian forces.

This process was well under way when Anwar Sadat came to power in 1971.<sup>86</sup> Lieutenant General Saad el Shazly was elevated to Chief of Staff of the Armed Forces on 16 May and directed to prepare for the implementation of one of the two major plans for the crossing and recapture of the Sinai lands. His second task was to strengthen the military ties with the Soviet Union. On 2 June 1971 at a meeting of the Armed Forces Supreme Council, Sadat told his military leaders:

When we plan the offensive, I want us to plan within our capabilities, nothing more. Cross the canal and hold even ten centimeters of the Sinai...and that will help me greatly, and alter completely the political situation both internationally and within the Arab ranks.<sup>87</sup>

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<sup>85</sup> Ibid, pp. 440-441.

<sup>86</sup> Sadat assumed the presidency on 15 September 1970. It was not until seven months later, however, on 13 May 1971, that he consolidated his power and united his presidency. The preparations for war began in earnest at that point.

<sup>87</sup> Shazly, Saad el, The Crossing of the Suez, (American Mideast Research, San Francisco, CA 1980), pp. 99-106.

The two plans had been developed by General Shazly and the former Chief of Staff, General Fawzi. Fawzi had favored an ambitious plan (Operation 41) that would strike deep to capture the key passes into the Sinai. General Shazly strenuously argued for a less ambitious plan (The High Minarets) which would accomplish exactly what Sadat wanted. The objectives were: 1) Swift surprise crossings with infantry; 2) followed by mechanized forces to defeat the Bar Lev fortress line; 3) establish a defensive line 5-6 miles east of the canal; and 4) extract significant losses on the Israeli Defense Forces. Shazly favored this plan because of the weak Egyptian Air Force, the fixed Egyptian air defense umbrella, the need to fight the Israelis in a means unfavorable to them, and the possibility for a political solution to the capture of the canal.

General Shazly saw four major obstacles to overcome in either plan. First, the canal itself. It had concrete reinforced sand banks that were from 180 to 200 meters wide. The erosion of the sand banks would inhibit crossings by multiple vehicles. Second, since 1967 the banks had become huge sand hills 20 meters high and 20 meters wide at their base. Accepted engineer practices could not pierce them in less than seven hours. Third, was the system of Forts called the Bar Lev line. These fortified positions were constantly manned. They were spread along the entire border area and clustered at the obvious crossing points and would be reinforced within 48 hours by tanks and infantry. The fourth barrier system was a "secret" system for putting flammable liquid onto the surface of the canal and igniting it.

Shazly had worked hard to develop his engineer and amphibious capabilities and he devised a method for plugging the flammable liquid tanks using commandos. Egypt then came serendipitously across the key to crossing the canal. A young



engineer officer had used high pressure water hoses to reduce a mock-up sand bank in only two hours.

The next problem had to do with the relationship between the amount of gear (ATGM missiles, water, ammunition, mortars, etc.) required and the relative speed of infantry crossings to that of armor and motorized columns. To solve this problem there ensued a detailed study of the soldiers load unlike any other. The mission, the proposed threat, and resupply were factored to provide the maximum speed of crossing to overwhelm the Bar Lev Line. In addition to the tailored loads the Egyptians developed a fleet of carts that allowed two soldiers to haul 375 lbs two or three miles over rough terrain. Ultimately 2,240 of these vehicles crossed the canal carrying 336 tons of materiel. Finally, he worked on the reserve and mobilization system to enable rapid and efficient expansion of the Egyptian forces.

The items above gave Egypt the capability to reach and control the far bank before Israel could react. Now the elements of deception began to be woven into the plan. The Egyptians forged an alliance with Syria, through leadership in reforming the Arab League.<sup>88</sup> This introduced a strategic perspective to the situation that *should have* radically altered the Israeli estimates. This was a critical component since the Israeli saw any union or joint action between Egypt and Iraq or Syria as impossible. The quiet agreements in 1972 that made this possible set the strategic framework for surprise. One wonders if the contacts between Sadat and Secretary of State Rogers were intended to circumscribe or measure the U.S. possible responses.

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<sup>88</sup> Ibid, pp. 94-96. The senior leadership, with the exception of General Shazly, did not favor many of the compromises required by Egypt to insure the 1971 rebirth of the Arab League.

The Egyptian rebuilding process included major annual exercises occurring just before Ramadan. These exercises sent the Egyptian forces rushing out to defend the canal from attack and included preparations for counter attacks. These had occurred in the four years previous causing Israeli reaction. In the last three years prior to the war, the Israelis had mobilized at great cost to their economy and, most importantly, their politicians. Mobilization virtually paralyzed the Israeli economy, shutting down factories, airlines, services, and disrupting every sector of life.

The Israeli world view had evolved through the 1948 War, the 1956 War, the 1967 War, and the end of the War of Attrition from 1967 to 1970. The peace they now enjoyed and the cost of mobilization now combined with "an impregnable" defensive line along the reinforced canal. Without alliances with Iraq and Syria, Egypt could not achieve any deep objectives of consequence. The huge land space of the Sinai and the other occupied territories provided a large buffer, behind which the Israelis lowered their readiness. This happened gradually and incrementally, but by mid-1973 the Egyptians had opportunity and a leader who saw the benefit of limited, politically terminated conflict.

Cover and Concealment operations were used in many ways. Preparations at unit locations and in exercises were concealed as much as possible. Exercises were conducted at night and vehicles returned to covered positions at daylight. Units exercised reacting quickly to simulated crossing attempts, then returned only part of their unit, leaving part in covered positions in the shelter of the bank. Ammunition was forward deployed into underground bunkers in this way. Bridging and other special equipment was forward deployed under cover or disguised to look like other more innocuous equipment.

Disinformation focused on stressing western stereotypes of the Arab that were prevalent in Israel. Psychological warfare (PSYOPS) emphasized that Arabs cannot keep secrets, their forces are militarily inept, they cannot plan or conduct coordinated actions, and their soviet equipments (especially aircraft and electronics) are poorly maintained and supported. It was also publicized widely that Sadat would deliver a major peace making address in mid October in concert with the heightened tempo of political pressure for return of the occupied territories. Orders were circulated and extensively publicized allowing personnel to make the pilgrimage for Ramadan.

Diversions were conducted to provide numerous cues that signaled normal operations and underscored the PSYOPS themes above. Officer leaves were continued. Demobilization was conducted and publicized on 5 October. Highly visible public transports were used to support the demobilization. Soldiers in the forward areas were forbidden to wear their helmets. Units known as lazy squads or lazy battalions populated the canal in the weeks prior to the attack.<sup>89</sup> They fished, dangled their feet in the water, played football, and generally exhibited a nonchalant attitude that was communicated to the defenders of the Bar Lev line and the intelligence service. To increase the survivability of their fixed SAM sites, the Egyptians used numerous dummy sites and aircraft decoys to enhance survivability and aid in acquiring engaging aircraft.

The final element of the plan was the intensive and detailed and *centralized* preparation, training, and practice by which the movements to the crossings, the crossings, and the reinforcement were orchestrated in excruciating detail. Plans of

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<sup>89</sup> Awwad, H.S., The Use of Deception in the 1973 Arab-Israeli War, Student Paper (TDRC #7999), British Army Royal Staff College, Camberly:1977, pp. 8-9. LTC Awwad was a company commander in the war and provides reference to the "lazy battalions."

this phase were personally examined and refined by the Chief of Staff to insure their accuracy.<sup>90</sup> The crossings were important enough that General Shazly was the Crossing Commander. The Egyptians crossed 100,000 men, 1,020 tanks, and 13,000 vehicles in 24 hours!<sup>91</sup> General Shazly asserts that this was the "largest first day crossing in world military history."

The attack timing capitalized on the Yom Kippur holiday, Ramadan, the Knesset elections on the 28th of October, the longest night (12 hours), the best tides, and the Jewish Sabbath. In addition, the attacks began at 1400 hours to give the Egyptians sufficient time to cross and pierce the Bar Lev line but force Israeli mobilization and deployment at night. This last point severely limited the Israelis initial air response.

The Israeli government's Commission of Inquiry determined that on the morning of 6 October the Israeli Defense Force (IDF) Supreme Command did not evaluate that war was about to commence. Surprise was caused by three elements:

- 1) Obdurate adherence to "the conception," that popular proposition which said that the Egyptians could not launch a war without the aircraft to support attacks *in depth*, and that Syria would not attack *without* Egypt.
- 2) The Director of Military Intelligence assured that there would be a *minimum* of 48 hours warning time.

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<sup>90</sup> Shazly, pp. 64-69. This phase was related to the soldier load issue. Individual soldier loads were accounted for. Each crossing and crossing vehicle numbered (144 crossings) and the route color coded, sign post, lateral routes, all absolutely complete in every detail. This was degraded as support vehicles began to conflict with returning casualties and new priorities.

<sup>91</sup> These personnel crossings were as follows: 32,000 men in rubber boats, 1,000 men in amphibious vehicles, 4,500 men in tanks and carriers over ferries, 1,500 men over light bridges, and 61,000 men over heavy bridges.

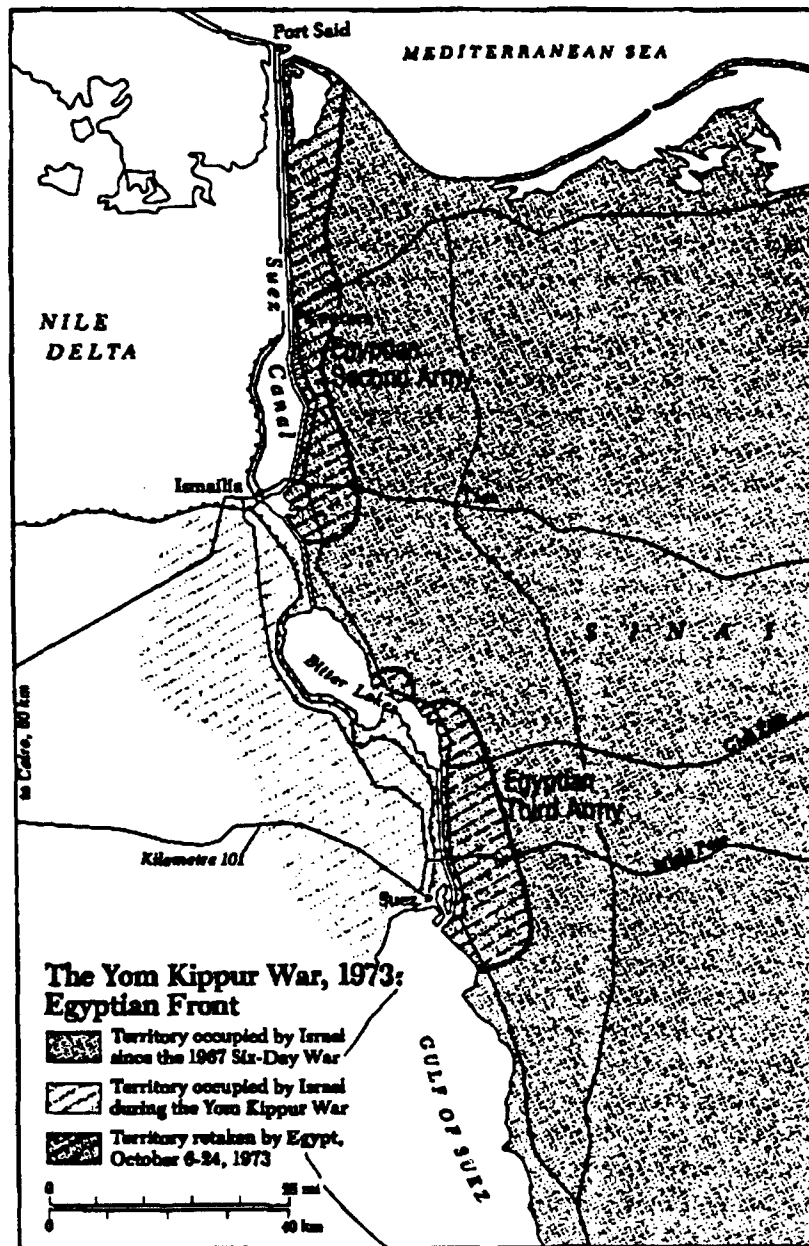


Figure 17. The 1973 Arab-Israeli War 6-24 October, 1974.

- 3) Numerous unique indicators of "multi arm" formations of unprecedented size were inaccurately evaluated (see 1 and 2 above).
- 4) The enemy deception, under the guise of an exercise succeeded in misleading the IDF.

The attack unfolded as planned. The crossings succeeded and the motivated and trained forces poured across the "impenetrable barrier" of the Suez Canal. The Israeli reaction and mobilization proceeded as expected. The Israeli reacted to an attack they expected, but not in time to prevent a major foothold in the Sinai. Both Syria and Egypt had limited objectives in this war. The primary objective being to break the "log jam" that had existed in the Middle East since the 1967 War.<sup>92</sup> They were ultimately successful in that effort. Additionally, their success imbued both countries (Egypt and Syria) with a new sense on national pride. Despite their losses, they succeeded.<sup>93</sup>

### *Analysis.*

This deception highlights many of the most interesting and fascinating aspects of deception. It shows how the deception victim's own preconceptions act to trap them. As they come to accept certain propositions as fact and then plans other events based on those faulty assumptions, two things occur. They becomes fixated on the expected course of action and the weight of the additional planning lends credence to his preconceived notion. The Israeli notion of "the conception" is a fine example. It

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<sup>92</sup> Herzog, Chaim, p. 315.

<sup>93</sup> Throughout his book General Shazly blames "politicians" for the decisions to go deeper than he advised, which caused the encirclement. By this, he probably referred to President Sadat and General Ismail, the Director of the National Intelligence Service.

had validity at one time, but it lingered long after its factual basis had disappeared and Syrian-Egyptian cooperation in war became a virtual *fait accompli*. Israeli actions at the Bar Lev line and elsewhere were based on the assessment of "the conception" being valid as they evolved a defense based on that concept; it became self-fulfilling. Another example is the notion that an Egyptian attack had to have deep objectives and the capability to achieve them. This idea blocked out all other possibilities in the Israeli mind set.

This deception clearly illustrates the synergy achieved when a deception is played out at all the various levels of war. The Egyptians mixed notional strategic actions such as the peace talks and Sadat's upcoming speech with the Yom Kippur holiday, Ramadan, the upcoming elections and the Sabbath as ways to lessen tension. All of these gave additional credence to the operational level deceptions regarding the end of the deployment exercise, publicized reserve demobilization, and officer leaves. Against this backdrop, the continued tactical preparations blended seamlessly with each level enveloping the other becoming virtually impenetrable to Israeli intelligence.

Centralization and secrecy also played key roles in this deception. Each and every item of the least importance was a subject of interest by the Egyptian High Command. The result was an initial attack that was essentially flawless. Equipment and soldiers were drilled and prepared. The plan was repeatedly fine tuned to perfection. The controls on the press, the population, and the political system were exercised as well. Egyptian counterintelligence and police organizations worked in concert to suppress spying and leaks of all kinds. Coupled with the extreme and meticulous attention paid to cover and concealment, the resulting preparations did not reveal themselves to any real extent.

Once across the canal the plan failed in large part. The boundary between the armies was neglected and exploited, resulting in disaster. The low priority resupply traffic was not as meticulously orchestrated. Most important to this paper the deceptions did not continue once across the canal. Deception might have ameliorated the losses and hurried the political solution. Planning for this phase of the war was neglected in general.

Cover/Concealment	Disinformation	Diversion
Night Movements	Total "peace" effort	Demobilization
Secret forward stores	Sadat "peace" speech	Armor Reconstitution
Disguised bridging/ special equipment	Psyops themes of inept, poor plans, etc	"Lazy Squads"
Leaving units at canal	Ramadan leaves	Dummy radar/aircraft
		Officer leaves

Figure 19. This shows the operation by function using the author's deception hierarchy.

**Cost.** The Egyptian national commitment to this war must be factored as a cost. It affected virtually every aspect of Egyptian life for years. The total impact on politics, the economy, and the national debt is hard to assess. The replacement and restoration of their military machine was costly. They invested in equipment and materiel that was unsuitable to their defensive position, and thus not of utility after the war. It was, however, the special equipment (carts, covers, ATGM's, etc.) that contributed to their success. The increase in their defense structure and reserves were beyond their needs. Perhaps the thousands of dead, wounded, and captured



were the ultimate and tragic cost of this audacious effort. A possible end result of the risk that was undertaken by the Egyptians.

**Benefit.** The success achieved (despite the high costs) did a great deal to undo the cumulative effects that the many Arab-Israeli losses had taken on Egypt. The national identity and spirit was restored. The myth of Israel as an invincible foe was dispelled. Likewise, the myth that Arabs couldn't work together in coordination was dashed and a tradition of leadership in the Arab world was started for Egypt. The same is true of Syria to some extent. The political advantage of the installment of the Multinational Peacekeeping Force (MFO) has provided a buffer for Egypt unique in the region.

Cost	Benefit	Risk
National Commitment	Success	Early detection
Rebuilding Military	National Pride	Attacks into Egypt
Capture of 2d Army	Political advantage	Preemptive attacks
Special equipment	Arab leadership role	Defeat (minor)
National esteem Harmed by loss	Myth of Israeli invincibility shaken	

Figure 20. Analysis of the Egyptian's deception operation using the cost, benefit, risk parameters.

**Risk.** The Egyptians risked early detection and response or retribution from the Israelis. The fact that this deception, on such a large scale, remained secret is truly amazing. That sentiment was echoed by Shazly as well.<sup>94</sup> These retribution attacks might have conceivably resulted in the loss of additional Egyptian territory. The use of weapons of mass destruction cannot be completely ruled out as a potential risk

<sup>94</sup> Shazly, p. 86.

here. Finally, a defeat (as opposed to the positive effects of the partial victory) could have made the high costs of this adventure even higher. The loss might have had far reaching effects on the Egyptians and the stability of the region.

### ***Chapter Summary and Conclusions.***

All of the foregoing examples exhibit trends. One of these is, that the costs of these operations are generally less than one might expect despite the apparently high risk factors. The risks are actually relatively low when viewed in relation to the low probabilities of discovery or preemption seen historically. The benefits, on the other hand, are constant and significant. They appear to be uniformly high when compared to cost and risk.

There are many of intangibles involved in the business of deception. The higher the level of the deception the more intangibles come into play. The higher levels are also characterized by higher levels of apparent risk. The threat of nuclear exchange perhaps representing the ultimate level of risk in military confrontation. These examples show another thing very clearly. Military units at all levels are capable of incredible feats of mimicry, play acting, or whatever you want to call it. When called upon the average soldier's talent (and his committed civilian brother in the case of Egypt) for improvisation comes forward to make the deception successful.

Finally, the critical lesson in all these examples is, *how easy it is to become a victim of deception*. Several authors have made similar comments reading surprise. In the words of Richard Betts, a researcher at the Brookings Institute:

"Observers who see notorious intelligence failures as egregious, often infer that disasters can be avoided by perfecting norms and procedures for analysis and argumentation. the belief is illusory. Intelligence can be improved marginally, but not radically, by altering the analytic system."<sup>95</sup>

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<sup>95</sup> Betts, Richard K. , "Analysis, War, and Decision: Why Intelligence Failures are Inevitable", World Politics, (Princeton University Press, Princeton, NJ:1978), p. 61.

## Chapter 5

### Conclusions and Recommendations

*"Always mystify and mislead the enemy."*

General Stonewall Jackson

Having reviewed the definitions, the literature, and the historical examples of deception, one wonders why this powerful tool is not in widespread use by our Army. We have used it in the past to devastating effect. Our allies use it, and our enemies have made it practically an art form.<sup>96</sup> Meanwhile the U.S. Army proceeds with increasing reliance on technology, firepower, and greater efficiency in the synchronization of combat power.

The data presented here is conclusive and strong. Deception is a powerful and cost-effective force multiplier. In the words of T. L. Cubbage, "A commander uses his forces to close with and physically destroy the enemy. He should understand that he uses deception as *mental artillery* to destroy the enemy's confidence and spirit."<sup>97</sup> The starting point for that understanding should be the White Paper. This author supports a rewrite of that important document so that no one can have the least doubt as to the direction and intent, or their personal responsibility for the integration of deception within the U.S. Army.

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<sup>96</sup> Students at the British Army Royal Staff College are taught deception, in part, by having to read the writings of Stonewall Jackson. Interestingly, there exists no parallel requirement at the U.S. Army Command and Staff College. (The author *is not* inferring that the British are particularly advanced in their treatment of this complex area of study although they have exhibited a flair for it).

<sup>97</sup> Cubbage, personal interview, (April 1990).

### ***What the White Paper Should Have Said.***

The White Paper should have communicated forcefully and directly to establish that battlefield deception is a priority for the U.S. Army. The tentative language of the paper failed to convey the vision or the urgency of the subject with adequate clarity. The Army has fostered a healthy and vigorous spirit of debate in the field to help insure the fullest discussion prior to adoption of new programs. That debate depends on clarity in the mission tasking. The White Paper did not provide that to the field. The community is reacting responsibly when they question proposals. They react just as responsibly to directives that mandate or direct immediate adoption of new techniques.

The paper should have directed the immediate establishment of an Army deception program. The program should focus on three immediate actions, integration of deception into the training base, development and integration of deception into U.S. Army doctrine, and the creation of deception coordination offices at Department of the Army and TRADOC.

***Training.*** Deception presents the U.S. Army with a unique and urgent training challenge. The urgency arises from the radical changes in both the threat and the smaller (and presumably less capable) U.S. force structure with which to meet it.

The requirement for deception and other force multipliers seems clear. The training challenge is seemingly just as clear. This challenge should not wait until the doctrinal process produces a completed doctrine. The training and the doctrine development processes can operate parallel to one another. In fact, the training

process can augment and assist the development process by providing detailed input to the doctrine and research developers.

The first step in this process should result in additional instructional hours dedicated to deception at all officer development courses. The War Colleges and, the Command and Staff College should increase the emphasis on the subject and insure that it is integrated into the tactical and operational warfighting course work. It should be integrated as an evaluated portion of practical exercises with significantly more attention given it. Advanced and basic courses should also receive deception training integrated *with* the other course work, not as a separate block of instruction.

Next in priority is the aggressive institution of deception into the Battle Command Training Program (BCTP). The BCTP Opposing Force (OPFOR) can immediately institute vigorous *maskirovka* as a component of the exercise. This process will help to foster an appreciation of the dynamics of deception through the controller system which can quickly be prepared to institute deception as a key component of the pre-exercise training and the exercise itself.

BCTP has three other attributes that make it ideal for the institution of new doctrine within the Army. First, it is *the* training ground for our senior leadership at the tactical and operational levels.<sup>98</sup> Second, the trickle down of this doctrinal effort will quickly spread throughout the Army. As commanders and staffs return to home stations, they will include deception in future exercises, war plans, and officer

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<sup>98</sup> Recall that Corps is included as an operational level echelon for purposes of this paper because it operates at that level on occasion, normally dependent on the mission assigned.

development programs. Third, the detailed documentation and feedback provided can be utilized by researchers and doctrine developers to speed the doctrine process.

The National Training Center (NTC) and the Joint Readiness Training Center (JRTC) are both similar to the BCTP in their capability to rapidly disseminate and validate new doctrine and techniques rapidly and the detail of the documentation to provide feedback to the doctrine developers. Both institutions can establish Battlefield Deception (BATT-D) control element to facilitate and evaluate units. This approach will expose battalion level units to tactical deception at the low-, mid-, and high-intensity levels of conflict.

The ARTEP is another excellent way to signal the emphasis and intent of the Army in this area. By the inclusion of deception in the ARTEP, units are sure to allocate appropriate time throughout the training year to develop the requisite skills and expertise. This approach will inculcate a multi-echelon approach to deception. Commanders, staffs, and soldiers at the brigade and battalion levels will begin the process of acquiring experience with deception. This may prove to be the most valuable aspect of this approach to integration of deception.

The School of Advanced Military Studies can also be engaged in this process. Their exercises, the monograph program, the exchanges (British, German, and French Staff Colleges), and the Fellows program are all excellent means of researching, experimenting, and integrating deception doctrine and techniques. As these key planners move out into the Army, again the trickle-down effect will operate as the plans of our corps and divisions (with BATT-D element involvement) begin to reflect this new expertise.

On the operational side, deception strategy and operations should become a *major* component of REFORGER, TEAM SPIRIT, BRIGHT STAR, and other major exercises. Such exercises will truly provide the capstone training event for deception integration. Commanders and staffs will work in the joint, combined, strategic, operational, and tactical levels. This would provide numerous opportunities for exercise work replicating the sorts of contingency deceptions we might expect to encounter in the future.

*Doctrine.* This process will, of necessity, take some time, but the Army should not have to wait for the routine development cycle to be completed. The first two documents requiring revision are FM 100-5 (Operations) and FM 90-2 (Battlefield Deception). These two documents provide the basis for deception in the family of operational manuals.<sup>99</sup> The Operations manual (FM 100-5), written in 1986, is in need of revision and can be rewritten as a priority project to limit the delay.<sup>100</sup>

The challenges facing the Army as we reduce the force size while adopting deception and maintaining readiness and modernization require another major effort, like that of the 1986 operations manual. This will insure that our doctrinal basis is sound in this time of transition. The last three revisions of FM 100-5 (1978, 1982, 1986) were all undertaken in times of tension and change. This effort would capitalize on the training initiative stated above and would be the basis of a series of

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<sup>99</sup> The others requiring attention are: FM 34-1 (Combat Intelligence), FM 71-100 (Division Operations), FM 100-15 (Corps Operations) and FM 101-5 (Staff Organizations and Operations).

<sup>100</sup> The 1986 manual was written in a period of about six months by three principle authors; General Richardson (Cdr, TRADOC), General Cavazos (Cdr, FORSCOM), and Brigadier General (then Colonel) Wass de Czege.



General Officer Steering Committee Seminars to lay the direction and clarify what the White Paper did not.

The other TRADOC schools (Infantry, Armor, Intelligence, etc.) need to be brought into the deception program to insure cooperation and conformity. Unanswered questions remain regarding the decoy development, funding, and usage issue. The schools play key roles in development of this as well as the doctrine and training aspect. Their resources can help to reinforce the other responsible TRADOC agencies in the training and doctrine development process.

**Coordination.** Offices for the coordination and integration of deception should be established at Department of the Army and TRADOC to coordinate and integrate deception policies and doctrine. At Department of the Army, the office should function in coordination with the Joint Staff Command and Control, Communications Counter Measures office (C<sup>3</sup>CM). This requirement is based on the complexity of the issue as a whole, *as well as*, the increased complexity of integration in the joint sphere. The implementation of an Army strategy for joint deception is a requirement outside the scope of this paper, but increasingly important as the 1990's emerge as the decade of joint contingency operations.

There are additional reasons for the establishment of a coordination center at the department level. Key among these is the establishment at that level (or within JCS) the capability to plan and execute deception at the strategic level. This was accomplished in WWII by following the British lead with the London Controlling Section. As this paper has shown, there is a requirement for centralized control of

deception. Part of that centralization should reside with the ODCSOPS of the U.S. Army.

The Department of the Army office will not duplicate the TRADOC proponentry function. The ODCSOPS Office of Training doesn't perform the TRADOC training mission, it assists in the coordination, integration, and resourcing of Army training in concert with TRADOC. Additionally, the lack of a deception *culture* in this society makes the adoption of deception into our warfighting doctrine doubly hard. This is exactly the sort of coordination which would be properly undertaken in concert by these two offices.

This is an aggressive proposal. As discussed earlier, the risks and costs are low and the benefits are high. As the United States decreases the size and forward deployment of our force structure, the need for leveraging strategies is greater than ever. Deception is exactly that, a means to gain the maximum advantage with the least resource expended. The key to that advantage is the development of a doctrine, and the training of a competent and flexible force. If the program set forth here had been included in the White Paper, the U.S. Army could have a coherent and functional deception capability in two to three years.

### ***What the Doctrine Should Address***

***Complexity.*** First, the Army must recognize that this complex field cannot be reduced to component parts as one breaks down a rifle or a vehicle power pack. Doctrine, training, and instruction must recognize that complexity is inherent in deception. This

complexity is at the heart of its power and utility. Practitioners of this art (commanders, planners, and executors alike) must learn to appreciate the totality of deception, including the complexity. Yielding to the temptation of simplification runs the risk of producing a transparent deception capability that not only fails to deceive the enemy, but may, most dangerously, deceive us.

The historical examples in chapter four all show deceptions of incredible complexity. Operating at all levels of war and across all the disciplines of deception simultaneously, the enemy became unable to ascertain the "truth." The Germans, in fact, became so demoralized in the months following the Kiev defeat that commanders came to have virtually no regard for the intelligence estimates of the OKW. The complexity and power of this operation was achieved by a system well practiced in its application. Rybalko, the 3rd Guards Tank Army commander received the order to move his Army north only 9 hours before he signed the order to his Army! His subordinate commanders commenced the 200 kilometer movement only 21 hours after that. The result of this efficient staff planning and flawless execution devastated the German war machine at a low cost.<sup>101</sup>

*The Proposed Deception Hierarchy.* The author proposes the use of the deception hierarchy shown below. This hierarchy accomplishes two things. It integrates the functions of OPSEC and deception under control of the plans, operations, and exercises directorates [section] in the staffs. Secondly, this approach integrates cover and concealment with diversion and disinformation. Disinformation is one of the

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<sup>101</sup> Glantz, Soviet Military Deception in the Second World War, pp.264-267. Vatutin issued the order to 3rd Guards Tank Army at 1800 25 October directing submission of march orders by 1000 26 October. Rybalko signed the order at 0600 26 October and his Army commenced the movement at 0300 27 October, arriving at Lyutezh on 2 November.

least developed areas within U.S. Army deception. Adoption of this proposed hierarchy will draw the area of disinformation into the plan development process. In comparison to the current "cornerstones" approach shown in Figure 3 (page 15) this model offers functional utility not present in the other.

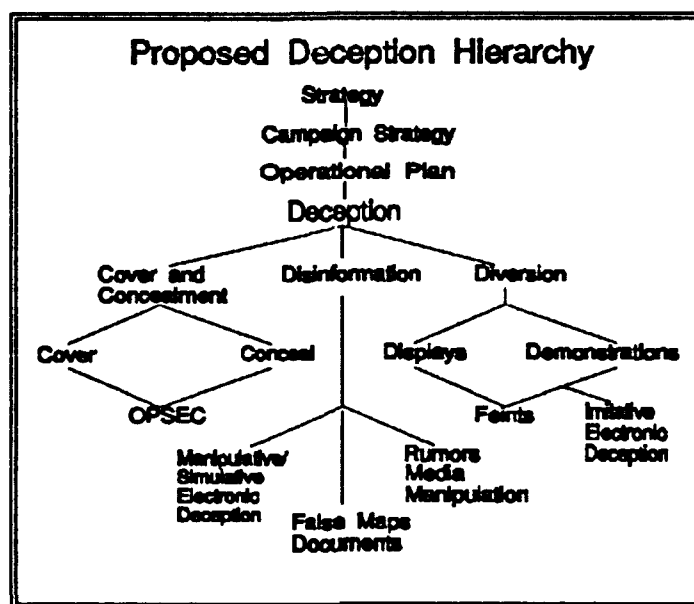


Figure 20. This hierarchy proposes the joining of all components of deception under the three headings of cover and concealment, disinformation, and diversion.

***Sub-optimize the Course of Action.*** This is a critical factor in the U.S. Army adoption of deception. Fundamental changes are required in the current planning methodology to realistically integrate deception into U.S. Army operations. The current offensive methodology tends to yield a "best" or optimal course of action that puts the U.S. action on the obvious avenue of approach with one supporting attack and significant aircraft and firepower backup. The defensive solutions tend to choose the best ground for the main defense and apportion the forward area to a covering force. This is also backed up by mobile firepower. Both approaches possess strength, but both are inflexible and vulnerable to threats from unexpected directions.

Worse, both are absolutely predictable. This might be an arguably sound strategy when your force far exceeds that of your enemy, but even in that case the current solutions are not the most efficient, cost-effective, or flexible. As the U.S. Army faces funding and force reductions, the need for efficiency becomes even more critical.

The solution is the adoption of sub-optimal courses of action. It is in these less-than-optimal courses of action that one discovers the leverage that makes deception successful. We must assume that the enemy can deduce our "most probable course of action" and work to counter it. By using another approach we capitalize on the preconceived premise of the enemy. Initiative and surprise immediately accrue to us. Then the choice is made among other courses of action to find a sub-optimal course of action "which gives you the greatest number of options at the last minute."<sup>102</sup>

The historical examples of Gaza and Kiev both exploited the sub-optimal course of action to surprise the enemy force. Each maintained the fiction of attack along the avenue that the enemy anticipated. The enemy was only too eager to believe that the expected outcome was, in fact occurring. The same point can be made in reverse for the 1973 Arab-Israeli War. The Israelis viewed the attack into the Sinai as a sub-optimal course of action, one that common sense suggested to be foolhardy. Their preconception, although correct, was wrong. The sub-optimal course of action was the action of choice for the Egyptians.

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<sup>102</sup> General Cavazos continues "That's totally different than the best COA." Without that, "people are groping around in the dark and coming up with inane deception schemes that wouldn't fool anybody. It's a waste of time!"

### ***Cost- Benefit-Risk.***

**Cost.** Commanders seem to balk when it comes to providing resources for deceptions. Especially when the cost involves commitment of maneuver forces. This is related to the general problem of scarcity. The same problem arises regarding the allocation of any low density or high value item. The commander will need significant justification to use two or three AH-64 helicopters in a demonstration or feint role even if the helicopters are not otherwise occupied. The same is true for artillery or air defense assets.

One maxim of deception is that the enemy will believe best that which he can see and positively identify. The corollary to this maxim is, that the higher the relative value of the identified resource, the more likely the enemy is to incorporate it into his estimate of the situation. In other words, the higher the value of the exposed resources, the more likely the victim is to believe the deception story portrayed. The list below suggests the author's perception of relative value of U.S. Army units shown in order of their priority.

Special Operations (DELTA Force, Ranger, Special Forces)

Maneuver Units

Aircraft (Attack and Lift)

Artillery

Air Defense

Logistics Units and Concentrations

Logistics is an underlying cost of deceptions which should be considered. Its impact is felt in two ways. First, the deception force committed

must be resupplied, possibly to the detriment of the main force. Second, the resupply effort could compromise the deception. Conversely, failure to adequately "resource" a deception with logistics can compromise it as a fake. For example, obvious resupply connection to a unit portraying a separate relief column on the flank would tend to invalidate the deception story. The required resupply would have to be taken with the deceiving unit or provided surreptitiously. The high expenditure rate for mechanized units, particularly in fuel makes this cost a real consideration.

A deception can be important enough to commit a reserve element to conduct it. The mission cannot take the unit too far out of its zone of action. It must be able to respond to the possibility of a catastrophic enemy success within their zone. Does that mean it has to sit and wait to be committed? The author contends that movements of the reserve can be orchestrated to facilitate deception *and* the accomplishment of the reserve mission as well. Movements behind the protection of a hill mass to (to "blind" enemy collection) can allow the unit to be displayed in several locations in the course of 24 hours. The displays could be used to portray resubordination, attack preparation, or simply to input confusing and ambiguous signatures to the opposing force. This use of a reserve force leverages its value by using it to accomplish more than one mission at a time.

There is risk associated with decreases in flexibility. An obvious reason for commanders to resist diversion of assets to any mission is the resulting decrease in flexibility. Flexibility can be defined here as the potential to undertake any *possible* initiative. Flexibility suffers when combat power is distributed over too wide an area. The same can be said of the example above where a unit has two

missions to accomplish. Each mission detracts from the potential capacity for conducting the other, and subsequent additional missions serve to further reduce that capacity until some finite end point is reached. The evaluation of this aspect of cost is difficult in the extreme, but crucial. The analysis of flexibility cost is ultimately the key to risk assessment. In the state of virtual risk in which a military unit exists, any decrease in flexibility is a matter of grave concern.

Why are commanders reticent to commit forces to diversions, feints, and other deceptions? Is it the simple concern that there are rarely surplus forces available to conduct deception. Or is it the uncertainty of releasing 10% or more of your force to an action that will not *directly* bring about the destruction of the enemy.<sup>103</sup> The symmetry of this proposition is perplexing. Only a fraction of a given force is in the battle, yet we resist putting part of our force to the business of deception which might enable us to bring even greater amounts of combat power to bear on the enemy! We shepherd our combat power for use as reserves, employment in a *coup de main*, or some other purpose, as if we are skeptical of the value of deception.

***Benefit.*** Virtually every authority of the military art has identified surprise as a principle or tenet of armed struggle. All agree that a surprised enemy is weakened by the shock and disorganization that accompanies the surprise. Often this effect is so devastating that armies have dropped their weapons and fled the field. Our own doctrine clearly places a premium on surprise.

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<sup>103</sup> The US Army White paper on deception stated that commanders should be prepared to routinely commit 10%-30% of their combat forces to the deception effort.



Commanders achieve surprise by striking the enemy at a time or place, or in a manner, for which he is unprepared. Surprise delays enemy reaction, overloads his command and control, reduces the effectiveness of his weapons, and induces psychological shock in soldiers and leaders. By thus radically diminishing enemy combat power, surprise enables an attacker to succeed with fewer forces than might otherwise require.<sup>104</sup>

Can we learn to create the conditions for surprise? Waiting for it to occur by accident will not satisfy the exigencies of warfare. Commanders must find a method for *consistently* achieving surprise. This is the ultimate goal of deception: To force the enemy to react in *predictable* ways to allow the commander to choose the point and time of attack or defense. Only in this manner can the random nature of surprise be channeled and controlled. The benefit of surprise has the presumed corollary of placing the friendly strength on the enemy weakness. By use of the initiative and manipulation of the enemy the commander can place his combat power when and where *he* desires.<sup>105</sup>

Even partially effective deceptions have beneficial results in the confusion they can create in the enemy's mind and intelligence system. Once the enemy has the preconception that you will use deception in your operations, his intelligence assessment problems increase by an order of magnitude. Even when the deceiver is not deceiving, the victim must suspect that each action is a trap.

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<sup>104</sup> FM 100-5, p. 95. Listed as a characteristic of offensive operations.

<sup>105</sup> See the Arroyo Center (Rand Corporation) study on deception in Chapter 3.

***Risk.*** One must assume that risk plays a key role in the hesitancy to use forces to conduct deceptions. Some of the operative factors of risk appear to be: forces out of position, risk of discovery, localized weakness to enemy strength, and uncertainty regarding the enemy reaction.

***Forces out of position.*** Forces out of position refers to the risk taken when moving units in a deceptive manner, or positioning them where they can conduct a deception. First, there is the risk of moving at all, particularly when transitioning from the defense to movement. The relief, disengagement, and commencement of the movement are all fraught with risk, and that is only to start the move. If the unit is in reserve, some other unit will have to transition, move, and assume the reserve role. Thus the risk is even greater.

If an attack were to occur during the movement or during the use of a unit for deception, that unit will almost always be out of position to reinforce the fight in a rapid manner.<sup>106</sup> Since commanders are always managing scarcity with regard to combat power, the benefits of deception must be substantial *and* clear to absorb this cost. Deception outcomes are rarely clear, however, substantial they may be.

Forces detached in such a manner often have exposed flanks. Their absence from the formation prevents their contribution to the mutual support of the other units in the force. Their movement may yet leave another unit with an

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<sup>106</sup> Napoleon's right wing at Austerlitz is one exception to this. Placed in low ground, it was used to entice the Austro-Russian formation off the high ground. The right wing fell back, but remained engaged and throughout the day fixing the major allied force.

open flank. So, there is one more problem resultant from the repositioning of forces.

**Discovery.** Discovery during the opening stages of a deception is a risk one must assume in order to practice deception where actual forces are employed. The transition in mission, the movement, the preparations, and the initiation of the action are all likely to provide the enemy intelligence system with indicators that can be used in targeting and can assist in the estimate of intent. Preemptive strikes by direct assault or by air attack can be undertaken against the discovered unit.

The discovery of a unit might invalidate the deception. It might also cause the destruction of the discovered unit. Once the unit is repositioned and OPSEC reestablished, however, the worst that has occurred is that, 1) the deception has been spoiled, and 2) more ambiguous data is inserted into the enemy intelligence system. Since the movement itself (the discovered movement or the repositioning) will likely appear ambiguous it can be said to degrade the enemy C<sup>3</sup>I (command, control, communication, intelligence) system.<sup>107</sup>

**Localized Weakness to Enemy Strength.** This is the risk associated with enemy discovery and exploitation of the movement of a friendly unit. It comes from not knowing the precise enemy location and intent. In the absence of clear data, it is easy to assume that the enemy is capable of being

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<sup>107</sup> Cubbage, T. L., pp. 148-149. Cubbage talks about the distraction of noise where valuable, coherent data cannot be separated from the meaningful information. He terms this the *distraction of noise*. Another element that inhibits accurate assessment is fear.

everywhere.<sup>108</sup> The units you move and the units that remain in place both appear to be equally vulnerable since they *appear* to be weaker apart from one another than they when adjacent. The units may, in fact, be weaker, but the important consideration is, are they vulnerable or simply weakened. If the enemy cannot exploit the weakness, it is not a vulnerability.

Local weakness (or the appearance of it) is a major element in causing the enemy to commit precipitously to an ill advised attack. Such attacks would generally be conducted with insufficient planning and coordination, making the attacker weak, *if you have the capability to exploit*. Drawing the enemy into attacking under unfavorable circumstances is a devastating tactic which will cause the attacker to surrender the initiative. Inducing the enemy to attack a weakness a risky operation. It is an arguably better tactic if a friendly strike is not possible.

***Uncertainty.*** Warfare would still have risk associated with it even if we had perfect knowledge of the enemy's intent. Such is the nature of war. The business of deception would certainly be easier, however, if the enemy reaction was clear to some reasonable degree of certainty. Risk as related to this discussion results directly from this uncertainty regarding the enemy reaction. Lacking perfect knowledge, the commander find himself in a position of virtually total risk. This can be immobilizing if it is not properly managed.

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<sup>108</sup> The hysteria surrounding Soviet Spetnaz troops in the rear areas of our Corps in the Federal Republic of Germany is this sort of a reaction. The enemy cannot be everywhere. There are only so many teams and only so many potential targets. Hysteria, however, can replace rational and efficient action that is, in fact, one intent for the use of SOF/UW forces.

Pressing the intelligence system for more accurate assessments or more data can be counter productive. Intelligence systems provide estimates based on a complex set of requirements and criteria. "Most solutions proposed to obviate intelligence dysfunctions have two edges: in reducing one vulnerability, they increase another."<sup>109</sup> By focusing on one particular indicator or concern less attention is available to some other area of examination. Experience (and history) have shown that intelligence successes often arise from discoveries in unlikely areas. It is this thorough and broad data search that intelligence system attempt to achieve and systematize. Tampering with it at each "crisis" results in erratic and occasionally conflicting guidance to the system. This has been the basis of intelligence failures in the past. Betts says,

...the intelligence officer may perform most usefully by *not* offering the *answers* sought by authorities, but by offering *questions*, acting as a Socratic agnostic, nagging the decision makers into awareness of the full range of uncertainty, and making the authorities' calculations harder rather than easier.<sup>110</sup>

The resolution of this paradox ultimately lies with the commander based on experience, judgment, and the facts available. The successful management of uncertainty and not its elimination is the desired end state.

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<sup>109</sup> Betts, p. 73. He cites the adjustments made at the Defense Intelligence Agency after the seizure of the USS Pueblo. A key intelligence message on the incident was misplaced and thus delayed. The systemic corrective measure initiated a microfilming procedure that induced an addition three to four hour delay in the processing of the traffic.

<sup>110</sup> Ibid, p. 88.

Deception where knowledge of the enemy reaction is essential should not be undertaken without a positive feedback mechanism to provide the required information. The best feedback comes through Human Intelligence (HUMINT). Signals Intelligence (SIGINT) and other technical means can only occasionally provide the positive and timely responses required. Without a long range surveillance detachment (LRSD) in place or access to enemy cyphers there may not be the positive feedback to allow execution of a particular deception. The availability of a given feedback potential might even initiate a plan of deception.

The best cure for uncertainty involves attacking the opponent's fears. Without that predisposition the deceiver works against common sense to convince the victim there is an actual threat.<sup>111</sup> When the course of action is "two up and one back" along the best avenue of approach, the uncertainty (risk) inherent in a deception to the contrary is high. When the enemy is paranoid about his flank or a particular avenue of approach, a deception that exploits that fear has a very low uncertainty (risk) associated with it.<sup>112</sup>

### *Closing Remarks.*

Commanders must constantly endeavor to surprise the enemy. That is clearly one of the absolutes in warfare. Deception is one of the surest ways to achieve or create surprise. Through its use you can cause an enemy to move, stop, attack, or defend. Without a sound doctrinal basis regarding its use, it appears complex and difficult to integrate into operational plans. A good deception effort does not have to

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<sup>111</sup> Dr Luttwak asserts that common sense is the ally of deception. "Common sense tells your enemy what you are supposed to be doing, which isn't what you are planning to do."

<sup>112</sup> Livsey, William J., General (ret), USA, Personal Interview, November 1989, General Livsey, as a former commander of the Eighth Army, tells of the North Korean "paranoia" regarding Inchon. Having been once caught by amphibious landings into their rear, and having two long flanks associated with coastlines, all indicators of amphibious operations are greedily sought and given credence. This provides exceptional opportunity for deceptions.

be complex. What is simple is easiest to execute and is more likely to be discovered and acted upon by the enemy.<sup>113</sup>

Most successful battles in history have used surprise to gain advantage. Many used deception to gain that surprise. By its nature, deception beguiles and baffles the enemy. If the enemy even suspects deception, his most simple assessments of your intent become mired in the realm of "what if." Even when your action has no deceptive intent (or content) the enemy must consider it as a possibility. It likewise complicates his force structuring, deployment, employment, and so on. Perhaps most importantly, it inevitably introduces an element of doubt and uncertainty into the mind of your opponent. That factor contributes to your seizure of initiative from him.

It will take the U.S. Army considerable effort to learn to use deception well and consistently. It is not in the nature (or *culture*) of the United States or the U.S. Army to use deception. What is in our nature is the adoption of techniques and strategies where sound evidence of positive gain exists. The evidence presented here shows that deception is correlated to surprise, victory, and lower cost. As a result of the adoption of deception the U.S. Army will be a more capable and powerful force. The U.S. Army is not alone in its struggle to relearn this lost art. In closing, consider this recent statement by the Assistant Commandant of the British Royal Staff College:

I consider that we must make better use of a totally underused resource [deception]: if we don't we will repeat the mistakes of history in this regard.<sup>114</sup>

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<sup>113</sup> Cubbage states that, "A deception that is too complex to discover is obviously worthless."

<sup>114</sup> Mackenzie, J. J. G., (Brigadier, OBE), Surprise - The Neglected Principle, British Royal Staff College, (TDRC # 8025: 1988), p. 10.

## **Appendix A**



## INTERVIEW WITH GENERAL CAVAZOS

(Fort Leavenworth, KS February 89)

**MAJOR SPENCER:** Sir, how do you approach deception in planning.

**GENERAL CAVAZOS:** You make a plan and then you study the plan to see how deception could assist you, or do you make a plan with deception as an integral part of it? For the great leaders the deception was key part and partial to the operation if you really study that. I mentioned to you Rommel's attack out of Benghazi, when the British had to believe that he was leaving for his plan to be successful. I've not read the new manual, but success of the operation should not hinge on deception. That may or may not be the case, depending on the degree of risk, the risk situation that you are in. I am talking chicken and egg but I really do believe, both the plan and the deception is firmly in the concept of operation. If the manuals fail to discuss it in that regard, then you are not putting a plan together. What is the greatest attribute of a leader in combat? In peace time or any time the greatest attribute is trust in your subordinates, in war time, I'd say tenacity. It doesn't matter if your men trust you or not, if you'll stick. And then I've said, I've amended that for 11 BCTP's, that I want a commander with guile and cunning. Guile and cunning. Cunning is a concept. Guile is the fooling of people, they go hand in hand together. Guile is bewitching somebody, cunning is a clever concept of operation which you work so brilliantly on concepts of operation. You ever read that? It's in the August issue of Army Magazine, 1988. That's the whole sum up of a commander's ability and he doesn't mention deception in the thing but he really does mean guile and cunning and putting together the concept of operations. It's not a mechanical thing, its not this guy's got X and I've Y and force balance of such, you're not going to. How do I sneak up on this guy?

**MAJOR SPENCER:** Look at Sun Tzu and Clausewitz. They really say it, its right there.

**GENERAL CAVAZOS:** What I told you is, the best course of action does not lend itself to deception. The sub optimal runs it because that's what the guy wants to believe. The best course of action is, if he's already predetermined you are coming right there. Now you try to fool him some other way, as the book says, your perception, your preconceived notions are a lot better to work from than to change his mind. The way it's structured, it leads staffs to believe I've got this plan, what deception story do I create to help the plan. I would change doctrine to say, that in the old days, it said your plan should not depend on the success of deception. It may depend.

**MAJOR SPENCER:** It's not even mentioned. The doctrine, if we define the doctrine as 100-5. Which I know you had a big hand in. That deception as an integral portion is just left aside and I've always wondered if that's because it is that spark.

**GENERAL CAVAZOS:** I haven't paid much attention to it. I haven't taught tactics here at Leavenworth, the manual says you'll conceive a deception story. And yet everyone of mine was inane until I started actually making it a plan of my attack. Deception, I think every commander at every level can have deception that need not reinforce the central theme of deception. A company commander can have his little zone things to foil the enemy. Company and battalion commanders should have some screening suppression targets issued. Maybe we should have deception fires? If you are firing in this other area to draw his attention to it and he said, but it's

waste of ammunition. But we've had in BCTP examples of 2 brigades attacking all day, and then they come up against a hard thing but they are kind of used up. They continue with a new brigade in the center pass through the one of them and make a limited attack. The reds could say the gringos are attacking in the center of that divisions sector. There was no deception. Our fires led them to know he's coming in the center, I'd say that's when you save some other targets that you have uncovered but you save them, you could save some ammunition. But sometimes you've got to waste some ammunition, that's part of deception. But you don't hear that talk about deception first, you hear talk about mock tanks and mock helicopters. All that has a place in it too but first thing is the deception which takes the enemies focus off your selective course of action. The school teaches to run through your analysis and pick the best course of action. That no longer appears correct, you should pick the COA which gives you the greatest number of options at the last minute. That's totally different than the best COA. Second, if you want to have an effective deception plan you select a sub-optimal COA. Then you can really build a deception scheme to your concept of operations people are groping in the dark and coming up with some inane deception themes that wouldn't fool anybody, it's a waste of time. In fact, a poor deception scheme may lend problems to OPSEC. You may stick off the enemy by simply implementing your deception plan. That should be integral to the concept of operations. It is generalship.

**MAJOR SPENCER:** You are the only one who is saying it out loud. We are wrestling with it because the Army doesn't want to give itself to the cult of the leader. Our Army wants everything systemized.

**GENERAL CAVAZOS:** But then you would never have true combat leaders. It wasn't the Roman Army that conquered Gaul, it was Caesar. It wasn't the Carthaginians that crossed the Alt. It was Hannibal and Patton who raced across France. We like them all when they do it. We like the Rommels of history, the Pattons of history. Then we have old bread and butter, half-slipped poor commanders, a very methodical kind of guy, he ain't fooling nobody, he just fires correctly and he succeeds. And yet General Worth, when the 4th Army went around at Metz, they had very fine deception and made them believe he was going to attack Metz and they just went on around them and got behind them. There are an infinite number of Army and higher level deceptions but we seem to have excluded them. Some people have misinterpreted. I want to go back to that point I made, that there can be a deception at every level. Battalion, company, brigade, division, but you've got to be careful that the deception at brigade doesn't get in the way of division's deception. But it can be totally different in the form their deception takes. Hiding the time of the attack, deceiving the actual place, presenting them with some indicators, that all you have to do is look at the indicator of defense digging in. Then if you want them to believe you are going to be digging in, you have to expend some resources to show some people digging in, the indicators must be off, blowing up ammunition, showing them the indicators they are looking for.

**MAJOR SPENCER:** Spending resources is going to be the hardest thing for us to come to grips with. We do it in BCTP, conduct a demonstration where taking resources and putting them in harms way and not really even bothering to tell those fellows that you are just drawing some fire with them is a limited objective attack.

**GENERAL CAVAZOS:** What are you doing? A demonstration as a part of deception?

**MAJOR SPENCER:** They can be used that way. OPSEC can even be considered as deception to see this laid out as a continuum, where OPSEC force protection measures are over on one end and deception on the other. But at some point just the concealment or the lack of concealment begin to contribute to deception and you get all the way over to the big strategic operations....

**GENERAL CAVAZOS:** Well OPSEC is handled with operation, the terrible waste of effort to position all of the artillery over here in the right sector and only send one percent of the guns to the other sector, during the day. You've got 8 gun batteries you send one gun over there, that can handle registration, send all the others over at night. It wouldn't be too risky, because weapons can range to the other sector. Risky when the unit gets chopped up moving over at night, it is a lot riskier leaving them in that position once you've let the enemy see you gather your artillery there. Artillery is the greatest tip off of all to me and ADA is the second. Your array of artillery and an array of ADA are key indicators of intent.

**MAJOR SPENCER:** I was at the Pentagon awhile ago and was told that the funding for the ELINT and the SIGINT emitters is not going to be approved at all this year. There will be only limited funding for the decoys.

**GENERAL CAVAZOS:** I've often wondered how we can tell the reserve, say, 3rd Division Reserve, could eliminate transmissions for 8 hours. Now that means take your command control jeeps and everything else A Company, B Company, C Company, and replicate the brigade being there.

**MAJOR SPENCER:** The British do that with Hot TOCS, it's what we would call our jump CP's. The stuff that goes out and goes hot with the multi-channel and so forth. When that's not being used they sometimes support a deception by putting it in a place under the control of the deception folks.

**GENERAL CAVAZOS:** I'm telling you the reasons people don't do it. It is the risk business. It is very time consuming. And, you really will never know the extent of your success so there is a tendency for people to say what I am going to throw in cost. But hell, it may be, you won't know until after the war how much you fooled them. But, if they pretty well are defending all the way across the front you must have succeeded, they are going to be staggering their approach, you've got to go pick a dumb course of action. And make it work.

**MAJOR SPENCER:** They will find a way just to imbalance it. You mentioned one of the greatest was Beersheba. The enemy "knew" they were coming at Gaza but they went the other way at the main course.

**GENERAL CAVAZOS:** The way that went, was they had attacked Gaza 5 times in 3 years and had been defeated each time. Gaza is the door and Beersheba is the hinge, take the door off the hinges. This famous MI guy who later became a scientist said that. He was going to create a situation where he was going to convince the Turks and the Germans that I'm feinting at Beersheba but I'm going to really attack Gaza again. So the way he did it he rode in the desert on reconnaissance and carried a dispatch case, had a nurse write a love letter to her husband and put it in there, and a whole bunch of stuff and he then got a horse and cut its neck enough to make it bleed on the dispatch case and he kept riding because someone shot at him and chased him, and he dropped the rifle and the dispatch case. And it said in there they were going to make

them believe that we're going to Beersheba but we're really going to Gaza. He's going to come back to Gaza, there isn't any water, he doesn't have any business going there, if the horses don't get any water in 30 hours they'll all die and that was essentially horse drawn artillery and cavalry. And they kept coming and kept coming. It was the whole British Corps, and too late they discovered that this was the main attack, so the deception was frank, it would not have succeeded with, they would have blown up the wells. The wells were already wired to be blown up, but they said don't blow up the wells because they are really not attacking. The British had to have water in 30-40 hours because their horses were dying on the line, a very audacious attack across the desert without water.

**MAJOR SPENCER:** That's back to risk and back to the point you made with it being integral to the plan, success of the deception. Because it's always that kind of an event where you can get that advantage on them.

**GENERAL CAVAZOS:** And they kept waiting and kept waiting for D-day to come to Calais.

**MAJOR SPENCER:** I suspect we are doing deception on our REFORGERS.

**GENERAL CAVAZOS:** Not really, cause we've been practicing. I would have run every REFORGER to a different place. And then when the time comes go a totally new place. There's only one way to defend the three sisters at Fulda gap that I know of.

**MAJOR SPENCER:** We may get our chance. That's a whole other issue, what's your viewpoint on the situation in the Soviet Bloc, by the way? That's not deception I hope.

**GENERAL CAVAZOS:** Russia is very stable as a dictatorship, instability is what creates wars, not stability. If you've got a stable dictator that's smart enough not to create a war you get the condition of Gorbachev, destabilizing his country. Destabilization is so unbelievable if you think of the economic ruin that will be visited on the communist system. Milk right now sells for 1/10th of what it costs on the world market, and bread sells for 1/10th, and it's communism that everyone will have bread and milk and whatever. And they live in an apartment that they pay \$15.00 a month for. Now a guy has to work twice as hard and twice as long just to be where he was years ago. On the Russian side, the military may join him [Gorbachev] and then you'll have the Reds and the Whites fighting each other again. Which side do you take, do you wait and see the emergence of a total dictatorship again or do you back Gorbachev. This is the most dangerous period we've ever been in, because a stable dictatorship should be predictable, now it is totally unpredictable.

**MAJOR SPENCER:** What kinds of deception do you see effective on the low intensity end of the scale?

**GENERAL CAVAZOS:** First of all you have the terrible problem of surprise and low intensity of war. The elite units sitting at 3 ranger battalions, 82d Airborne and the 7th Infantry. The spy satellites going across can pick up the marshalling of those people so you really have to have some secret marshalling places other than the airfields that are so well known. In Grenada onetime, I think they had some plans in store for marshalling in different areas and getting airlifted out, but nothing looks like a C-141 fleet gathering at an airfield. That is a problem strategically.

**MAJOR SPENCER:** We wrestled with that at 7th Division and looked at putting ourselves under sheds, but the cost put an end to that, also the road march (4 hours) to Travis AFB.

**GENERAL CAVAZOS:** You can't use it as a show of force and never deploy, but from a deception standpoint, you would probably marshal someone like the 7th Division and get partial deception and send people from the East Coast. Should confuse the enemy to do it. The advantages in a low intensity war are that you ought to be able to blind with electronic devices, the Russians will tell the Nicaraguans we are coming for example, but we ought to be able to totally blind the Nicaraguans and shut off all their communications.

**MAJOR SPENCER:** Sir, that is all the time we have. Thank you very much.

## **Appendix B**

**Interview with General Donn Starry.**  
**(September 1989)**

**MAJ Spencer:** Sir, Why didn't FM 100-5 include deception beyond the one or two paragraphs, while surprise and the indirect approach were emphasized?

**General Starry:** 100-5 it was something, it was something that I knew needed to be in there. In the beginning in the 76 edition, we went to great pains to try to get nuclear, a nuclear chapter in the book that was unclassified and with which the SACEUR would concur, and we couldn't do it. We got their concurrence on what was in there but what was in there wasn't what we wanted to put in there at all and it was a problem of one classification, two the feeling in SACEUR headquarters that we somehow had to get allied approval to say anything about it and that and the whole thing sort of came unglued on that so we watered it down to what you see in the book. We did essentially the same thing in the 82 edition, with regard to nukes. And the same thing applied to deception, there was even less in both those books about deception than there is about nukes and we could not, we could not get the, just didn't have time to think about it. It had a spotty history and we didn't have time to think about it in sufficient detail, there was really no organized body of history research, historical research that would cover that and I just kind of chickened out trying to get it in there lest we say something that was not relevant and not useful, better leave it out than expose your ignorance by trying to write something about it. I haven't read the draft deception manual, so I'm not sure what it says.

**MAJ Spencer:** Do we train poorly when we encourage loosely planned brigade and battalion efforts at deception that lack centralized command and control resourcing?

**General Starry:** The answer to that is yes. I have great difficulty unless your, lets just, lets make sure we understand the level, I have great difficulty visualizing in a large theater of operations, as a theater in which you have armies, army groups, NATO, Europe for example had difficulty understanding how divisions would independently pursue deception operations independently being not that their not part of a larger core or army group scheme of deception, I have great difficulty with that. I suppose you can, I suppose you could do it but it would have to be very carefully put together to make damn sure that what the division section operation isn't deceiving the Corps as well as hopefully as the enemy.

**MAJ Spencer:** And there's examples of that.

**General Starry:** Yes, indeed.

**MAJ Spencer:** The British did one where the Army side of the house created a deception that the Germans responded to on the Naval Intelligence side of the house, who knew nothing about the deception and responded inappropriately.

**General Starry:** Be very careful.

**MAJ Spencer:** There seems to be a continuum in this business although you say that the doctrine or the historical background is not that clean and laid out. At some point you leave OPSEC those passive measures and move into more active things that then become problematic. Clearly we don't have any problem with OPSEC at the division level. But just as clearly theres probably a big gray area in there that needs to be defined to say what a division can do.

**General Starry:** It would be neater and less confusing if you took the OPSEC out. Do you plan to include that in deception operations?

**MAJ Spencer:** Well, as you can see from the bullets at the bottom of that sheet some of that has to be considered.

**General Starry:** It would be cleaner if you just kept that all in OPSEC. And deception operations are at this level and above whatever that level is, I think I would argue for Corps and above except in cases where you have say a Joint Task Force, or a division level insertion operation of some kind going on where that is the largest headquarters involved. So it isn't enough just to say it's a Corps level above it is a lot of people have to be able to do it depending on the size of the operation, the senior headquarters involved and so on. So it does have applicability at planning levels down to division and brigade even separate battalion small task force of some kind of level. If that is the senior headquarters involved and charge of execution. So somewhere in the doctrinal that has to be written out. For example, we had an elaborate OPSEC/deception operation in V Corps to conceal the location of the Corps Command Posts.

Two things started that; one is I found we didn't have an adequate C2 system when I took command in 1976. We had a half a dozen or so command vans with communications, the Plexiglass, and all that nonsense. They were housed (for operations) in a hanger at a local Kasern. Hanau, at that time, I think. They had to be one of the prime targets of the first wave of frontal aviation. The second, and that wasn't a deception operation, that was real. The second thing that I found was that the Corps main was 48 hours behind the covering force battle in terms of just posting maps, 48 hours. The third thing I found was the thing wasn't mobile, that the size had grown enormously the electronic and infrared signature was well known to everybody as far back as the Earls it was an abomination. So I went back to the book and we laid out a main, a rear, an attack. We put the main under a castle several hundred feet under ground out northeast of Frankfurt. We created a bogus site at an airfield with sedans coming and going, communications, and warm tents for the IR signature about 20 kms away from the main site. The big vans, communications equipment, and the Air Force CTOC were remoted 5-10 kms and cabled into the castle. We moved the staff in from the base camps at the deception location by civilian bus scheduled, as much as possible, outside the Soviet satellite windows. Now that, at the headquarters commandant level and at his little that was a big deception operation. But my question is, is that something that we're going to include in a description of deception operation. I think not. That's OPSEC isn't it? It has some deception in it.

**MAJ Spencer:** It's on that continuum.

**General Starry:** It's a borderline.

**MAJ Spencer:** I think it's an excellent point, because it's, I like you tend to think higher rather than lower. But there's an example where that guy is clearly conducting some aspects of deception. The headquarters commandant or all of the people that make him work. But it's not run encountered anything that's going on. The only way I guess it could be is when you start moving the fault signature in a position where it would then impinge on one of the division's rears by making it a much more lucrative target or something like that.

**General Starry:** Yeah. And we were ever aware of that and cognizant of the fact that we didn't want to screw up something else in the rear by locating that thing. Who else knew about this? The whole thing, the commandant and his people of course the workers, now there's a case where down to the individual soldiers, we had to brief the soldiers. The problem is we were trying to avoid being seen from above and having our pictures taken from above and then it became a big game. Now that's at the operating level of things, that is the actual people who were implementing the deception plan. My division commander's knew what I was doing and so did the regimental commander of the covering force, that's about as far as the knowledge went in the Corps. Let's suppose your going to send a battalion to the island, Italian Task Force, reinforced with Marines and what not to the island of Chimney Changa to rescue the American Ambassador. You train up three battalions, or two or four or whatever the number is, and each one has a different mission, and you play all of those and then you launch the one that you, they all could be valid operations and the whole thing is a big deception operation. There are all sorts of combinations and nobody needs to know except the guy in charge which one he's going to pick. They all go balls up, do OPSEC and it'll be seen you can't keep secrets, They'll be seen, they'll be monitored, and the enemy will be over there as possibly as uncertain in his own mind as many of the friendlies are about which one of these guys is going to do what. But only one man knows, or a couple people.



**MAJ Spencer:** In keeping it a secret kind of triggers in me one of the facets of this business and I don't just mean deception to this whole business of force on force. Of the windows being so small we think we wielded a sledge hammer but we don't really we wielded something that's more like a surgical instrument and you only have to miss by that much for the whole thing to have been wasted. questions like when you trigger one of these, when you decide how much the enemies bought into it therefore now you can trigger your operation that this was designed to set up those kinds of things are a little outside this although there is one thing in that piece and it's a concern of Colonel Schmidt who just came from V Corps. There is never enough stuff to go around whether it be stuff that your putting out there to replicate a signature or more importantly since we don't have ultra these days you've got to dedicate some intelligence assets to this and there's never enough INTEL.

**General Starry:** That's right. This thing I described in the Corps Headquarters, really required two sets of equipment one of which was real and one of which wasn't. Both of which was real, but one was operative and one wasn't, we saved some by putting a main in the bunker in the castle. Bunkers in the tunnels under the castle.

**MAJ Spencer:** And used Bundespost line?

**General Starry:** Yes. Everything was cables. There was nothing there that emitted. There were no emissions from the Corps main. We took IR pictures, we listened to it with everything we had, we turned our own stuff on it, it was clean absolutely clean. But there were all sorts of things within a radius of 10 to 15 to 20 kilometers around that some-of-which said well there it is right there, one of which clearly said there it is right there. Because it was designed to do that.

Art Winn was the G2 at the time. Arthur Winn, he and the headquarters commandant had most of the action, but I gave the overall responsibility to MG Herb Wolfe, my deputy. He took charge of that whole thing to include the deception operation. He's was an old NSA hand and very capable at deception. This is sort of physical stuff were talking about. The, I think the biggest danger, the biggest problem we face today apart from levels of command, who's responsible and whatnot. Is that fact that historically, most of these operations have been by enlarge communications exercises. Now, our ability to do that today with the communications revolution explosion or whatever you want to call it that we're in the middle of here has given us enormous capabilities, at the same time it has given us an enormous ability to monitor such things and to some extent perhaps to sort out whats real from what isn't real. The risk you run, I think is in that whole world is enemy intrusion into your command control networks. Not necessarily from a deception standpoint although, is that a deception? I think that's a new and more potentially powerful form of deception than we've ever visualized before.

**MAJ Spencer:** Indicative deception being used maybe inside a maneuver control system.

**General Starry:** Manipulative control of your maneuver control system for example.

**MAJ Spencer:** Along that vein, as we go through the college here we've begun to put ourselves in boxes in a lot of ways. I'm not here learning how to think operationally as much as I'm doing an awful lot of bean counting figuring out the does and don't of IPB and what's slow go and no go. Just as an example, we do the same thing with our logistics restraints and everything else. That makes us I think a little susceptible of course it happens less in the real world with most of us, but it makes us a little bit susceptible to getting too process oriented and not smelling the roses and helping the boss to discern when something just doesn't seem right. I don't know how the heck you teach something that doesn't seem right but it seems like when the deception comes undone and its not been the deceiver who made a mistake that cost that it's been because something just didn't hit a guy right. His intuition and his experience kicked in it wasn't because it didn't fit the requirement, the deceiver is pretty clever fellow. He's going to make sure that he knows that the slot that he's trying to put this piece of info in on the other side of the fence.

**General Starry:** We, I don't know how forward looking you want to be in this thing. But we, it seems to me, we are literally on the threshold of a of something that goes somewhat as follows; the debate over whether or not you can create a machine that will think like human beings has not been decided. If you want to follow this, I've got a book in my room, I'll give you the name of it. Its called Paradigms Lost. And one of the chapters in that book,

one or two of them tackle this problem, its a neat, really a good book. I'll dig it up for you. He goes through the set of arguments that deal with, can we make a machine that will think like human beings. Or is it that we've got what he calls and others have called the Chinese Box Syndrome, which your talking to the box and you don't really know whats happening inside the box and it doesn't make any difference the box does what someone would do if they were translating Chinese into English or whatever. Thought process standpoint in that whatever the form, fit and function is that's inside the box, the stuff comes out so it is assumed that this is a thinking box not for, that isn't human knowledge. On the other hand this guy, who is the author, with whom you don't necessarily have to agree, is a very smart fellow comes down on the side that the book is written as if there was a prosecution and a defense, it's written as a court case and he tries to sum up the case in the end as if he were the judge. It's extremely well done, but the chapter that has to do with this very problem, and it's very interesting and I think it would be worth your reading because, as we move forward in the battlefield, we have I sat with CSIS yesterday morning arguing about this for a couple of hours they are trying to do a study on land warfare into the year 2002 and to threshold. Great enthusiasm for machines that are going to collect all the information, process it, process it, buy ins from more sources than ever before, and make something out of it that the commander can use to run his operation. Well, this is really a command and control problem, but it relates strongly to what your trying to sort out here. If you believe, that computers can be made to think like humans, I don't know that I believe that, this guy sort of comes down on the side of it,

I don't know that I really believe that, but then I'm old fashioned. Your generation and the generation after you, is going to have to cope with that problem, they may not be able to think like people do but they will do things that are so close to the human thought process that unless you get inside the Chinese Box you will not be able to tell whether or not it, the number of neurological endings in the human brain is beyond the realm of the physically possible. To replicate. And it's hard for us now to conceive that the situation in which we could even grow the systems that were building to come anywhere close to that. Tomorrow afternoon some turkey in some laboratory will figure out how to do that and the whole thing will be an enormous problem. But if that comes to pass and we have the G2's machine, G3's, G4's machine, thinking like human beings this is an exercise in cybernetics and someone figures how to get inside those machines, and they will, just as sure as we're sitting here they will. We broke enigma, we broke the Japanese codes, we were reading their command traffic, yet we still had a hell of a time beating them.

**MAJ Spencer:** It is important to remember that despite the success of Overlord (and it's deception Fortitude) we still had a hell of a time defeating the Germans. We have to keep deception in perspective. It won't win the war but it just may help to husband your resources and may be crucial to winning one or two big engagements.

**General Starry:** Really successful commanders have somehow bypassed the existing architecture of their command and control system in order to bring in the kind of information they thought they needed to run their war. In some cases simple minded things like the way General Marshall sent pigeons out with the lead battalions of the AEF. When the wirehead was out the battalions sent messages by pigeon. Then Marshall would call the regimental commanders and tell them where the battalions were. Some commanders have used their signals intercept units to monitor friendly forces to maintain contact. Both Rommel and the Brits did that to some extent in North Africa. We did it in Fifth and Seventh Armies. Montgomery used a system called SIAM, which was essentially radio intercept unit. He had a group of officers with a dedicated radios to create a comms architecture to bypass the existing nets. General Patton used a mechanized calvary reconnaissance units with high frequency radios as a recce and communications asset with the lead task forces. And if you read the history of the Brittany Campaign in the Green Book Series, you'll find, I think you'll find he relieved, if memory serves me, one Corps commander and two division commanders or something like that, because he landed in his airplane in their CP and found out they knew less about what their forward units were doing than he did. Cause the sergeants were reporting directly back to the Army Headquarters and he was, he was, real time sort of informed on a nominal basis of what was going on out there, one of those sergeants was a Major General later and I asked him what he recorded and he went away and thought about that as nearly as I can remember it was only half a dozen things. Who are you, who are you with, where are you, who is the enemy and what's he doing and how's the fight going? And it was a spot report kind of form, but those spot reports from all those guys at lead task forces and gave the Army commander review of the battle that needed his division or Corps Commanders had. We have assumed that we were going to dump all of that information, Intelligence tape, friendly forces tape, logistics tape into some sort of a large cesspool or series of cesspools and like all such activities big chunks are going to float to the top. I find

nothing in the technology to give me comfort, a comfortable feeling that that's going to happen. The commander has got to put a drain on the, a drag on the system for what he wants to know. In V Corps, we, I had the guys develop a thing called Corps Battle Information Recording System, I sat down with the Corps commander, because I figured the problem was mine because the Corps commander hasn't said what it is he wants to know. So I wrote down, I have a hundred and some odd elements. I went and got a smart LTC named Wilson Shockler, now a MG commanding a division. I gave him a task force and on it built a system with the collaterals and cross checks and so forth and we tried it out on several exercises one full scale Corps exercise and several CPX's. And we wound up with something that has 50 some odd data elements in it. Shockler was then saying you have too much stuff in your system and aren't you the guy who was here saying I had, but he said I changed my mind. Now, the machine, the great thinking machine, let's just assume that this guy is right in Paradigms Lost, the great thinking machine is going to perceive all of that information what's it going to do with it? It has to tell that information to somebody, some commander has got to receive certain critical elements of that information, doesn't want to know everything, he only wants to know a few things and he really wants to know those against certain specific time lines so that he can turn his decision making time cycle inside that of the machine and the guy on the other side.

So someone has to establish those perimeters, you and I would sit, you wouldn't because your younger and more energetic, but I would sit and contemplate things for days if I didn't say to myself or have someone say to me we need to make a decision about this by 3 o'clock this afternoon or something else is going to happen. So that even if we're able to make machines that think like humans there still has got to be some discipline applied, to the thought process that goes on inside the machine. Now we can make those machines think deceptively, as well as non-deceptively, how are we going to cope with that? I'm opening another door that you think that.... Read this chapter in this book and think about it, if we're going to put thinking machines on the battlefield they can think deceptively, lets turn the whole deception operation over to machine X and machine Y and machine Alpha and their going to go off and run the deception operation, their going to think deception. Meanwhile, N, L, P, Q are over here thinking about the real thing. I mean this is, machines can talk to one another, if you have thinking machines can they communicate, of course they can. Who communicates with them, how are we going to control the cognitive process we have created in each one of those machines? The five pointed star, the Army's five pointed command and control, the guys yesterday were talking, we're going to get rid of the five machines and only have one. Wait a minute, are you sure you want to do that, I'm not sure you don't nor am I sure you do. Do we want that whole act of cognition of the battle to be in one place? I don't know, I mean it speeds things up, if you can discipline it properly it might work your time lines a little more efficiently but if it is a thinking machine and it thinks like a human being do you really want to do that, that's like putting one guy out there and, suppose somebody puts a bullet through his silly head.

**MAJ Spencer:** Are you familiar with the Soviets troop control system. They have created a C2 system based on logarithms and charts that go a long way toward freeing staff officers at division and higher to use their creativity to anticipate enemy action. We look at the Soviet as highly dogmatic and afraid to take initiative, but their troop control system is moving them away from that rigidity.

**General Starry:** I think the difference remaining between us and them however, is that they continue to crunch numbers from the great patriotic war that seem really quite tired. We are critical of them, disdainful almost, but it seems to me that there may be use there. It can probably define parameters and boundaries of many events. They [the algorithms] frame the commander an area where he can be fairly comfortable, knowing they have worked before. And as their political people judge their operational commanders, they are judged against the outlines of those boxes. Is what this guy practical and consistent? Does it conform to what history tell them is a successful operations? Those two questions having been answered, the political officer has not much else to say.

Now suppose that system goes down? Or somebody puts a bullet to its head? You know this is still, till we get totally internetted, and whatever, I don't know what state of the art we have to be at to make this possible but I distinctly remember, I went down to Ft. Sill one time when they were showing me TACFIRE, I was in TRADOC, and the van and the nice Captain who ran the van and whatnot and I stood there and watched this for a minute and I put my flat hand down on the keyboard and of course you had tilts and lights and all that stuff and the Captain he didn't know what to make of that stuff. And I said, now Captain why don't you go ahead and finish the

fire mission, I can't? I said why not? He said Sir, if you'll pardon me, the General has his hand on the keyboard? That's exactly right, I'll take my hand off the keyboard. But he said, you've screwed up the whole thing. Well I said finish it, you've got guns out there that are laid and ready to finish the fire. He said but I can't do it. Are you telling me you don't know how. He said, yes sir I'm telling you I don't know how, I don't have anyplace here where there's a pad of some kind where that thing left off and you just in effect put a bullet through the side of the van. As I suggested to you a few minutes ago, and we're out of business. So I turned to the commandant of the Artillery School and asked if he taught soldiers to do manual operations at the battery level. No we don't. Why not? We don't have time. Machinery may someday overcome that problem, but I, when we created the Corps Battle Information Reporting System we created it on long yellow paper with short yellow pencils, the thing breaks. Somebody knows how to do it manually.

**MAJ Spencer:** And the whole thing of EM P. The only good news about it is the Soviet is now as dependent on transistors as we are, so its not just as easy for him to throwing up a neutron or something and zapping everything in the battlefield, because everything stops. The HUMMV stop, the tank stop, the comms stops all of it.

**General Starry:** There's some frightening things, we're running our operation in the Middle East. One time when I had all non secure comms and we were at that point dependent on one satellite for command control from here to the Middle East. Some things happened in that communications linkage which we studied over some weeks and I came away from that study convinced that the Soviet's had done two things, one, they had tinkered with ours, probably to satisfy their own curiosity about whether or not they could do it. Two, to let us know that they could do it.

We're coming to an era where the machine, the thinking machine, is coming into the world of satellites and so on. We will be able to put more and more stuff on the platform as opposed to in the ground station. Now we bring it down and massage it and look at it and analyze it, and what not. You soon will be able to do most of that, we're in that mode now, see every time we launch a satellite we have to do a TRADOC analysis about what goes on the platform and what goes on the ground, and the technology's a pace, I'll tell you that. If that thing up there is a replication of a human intellect and it sort of, and it acts like that, you can spoof it. Spoof is the best word, you and I get spoofed, we're smart, us old folks at least say we're smarter than any machine, I don't know whether I believe that or not, but I can't process. Whether or not we are, there are still some things that I still think the human mind can do today that machines cannot do, some things that machines can do that the human mind can't cope with in terms of rapidity processing, intuitive things that you and I think about. Suppose we've got a machine up there with intuition and the machine is subject to spoofing, the whole deception, you can deceive a whole setup of platforms with a variety of sensors aboard, the whole system can be deceived.

There is an interesting commentary on AI in the book that I mentioned. We are now able to build a few expert systems to do a few very limited functions. You first have to decide what kind of solution do you want? Think about that for a minute, if you want an engineering solution to the problem we'll clone an engineers knowledge. So you build your engine in the expert system with a panel of experts who bring a set body of judgement to bear. It's particularly important to do that because if you want an engineering solution to the problem you go get a bunch of engineers, if you want a behavioral kind of a solution to your problem, you get a bunch of those people. So it's the discipline, the mind that you clone in creating the expert system that colors your outcome. You really have to understand that when you design the system. If you want to avoid a mechanistic, mechanical engineering kind of solution in the end, then you do not want strictly engineers doing the initial design. So how are we going to build our thinking machines? Our thinking machines are going to begin as a system of interconnected mini-expert systems; a system of systems.

We have built, for example, an expert system for onboard reduction of satellite anomalies. There commercial, although they don't have to be. We simply cloned what we were doing on the ground station and built an expert system and put it in the payload. So when something goes wrong it automatically reduces the anomaly and you never know about it.

**MAJ Spencer:** Let me ask an affiliated question. A few years ago at an G2 Military Intelligence Commanders conference we tested these guys to see how they solved the intelligence collection problem. Do they establish a

thesis and then set out with their collection to prove their thesis correct or do they use collection to try and disprove the thesis. The results were that 85% of our intelligence leaders tended to reinforce or confirm their thesis. Only 15% put the assets out insure that they were not surprised. What do you think that might tell us?

**General Starry:** The likelihood is that they, in a real situation where you have enough indications of something to cause you to think that may be right but you don't have enough to convince you beyond a reasonable doubt and so you put out a hypothesis. I do this all the time, but I don't do it without some information, 50-50 or 60-40, it's about right. It really isn't. Okay here's what it looks like, you guys go test this and find out if I'm right or wrong. That's alright so long as you understand you can be wrong. All too often people who get that far along in the thought process are saying to the guy who goes and does the analysis for them prove that I'm right and the person who receives the instructions depending on the difference in grade levels, thinks that he's being told to do is go confirm the bosses expert suspicions. That may not be, that isn't right in the first place and probably isn't what the boss wanted.

**MAJ Spencer:** It's not right across our entire institution. But particularly, I've always seen the G2 role on the staff as a devil's advocate. The guy that was allowed to play that role and it seems to me that if 85% of the guys in my business are advocating that role we've got some problems. What's behind all of that. Will an expert system applied to Arnhem at the end of WWII, recognize that one photograph of a tank gun out from under a tree spelled defeat to that entire operation, and I don't think it will. Because they base it on boundaries and thresholds and probabilities and correlation and so forth. So unless you said that one tank gun at Arnhem equals two Panzer Divisions you have a problem getting the system to recognize anomalies, but that requires almost a perfect knowledge of what's going to happen.

**General Starry:** It requires seeing, if you had seen that thing, or that guy had seen that thing. What you and I would call intuition. The Germans in the Ardennes. They assembled thousands of soldiers, hundreds of tanks, thousands of vehicles and whatnot. And the only guy on our side who read the signals right was the 3rd Army G2, Oscar Koch. The others waffled it. How did he do that? I asked him after the war what caused him to write that assessment the way he did and he said it was just intuition. He said "it may have been my German intuition, or it may have been my American intuition... I think it was my German intuition."

**MAJ Spencer:** He had to take the initiative and was tied down on all other flanks, so really had no other choice except to capitulate. If you put all those pieces together it all pointed to one thing.

**General Starry:** Yes, but that's in retrospect you see. You go back to the, what did Koch see, what did he hear, what did he know? Someplace in that whole bunch of noise that was coming out of that area, he saw the signals that he thought were important, and he kicked on those. But you could just as easily get lead astray, let me give you an example. On the 10th of February 1977, it was a foggy morning in V Corps, I mean zero, you couldn't fly you could barely drive all the way from the Rhein to the border. A Sergeant from a little OP up north of OP Alpha called me, called the command center, called me and said sir, I see, about 0230, 0300, sir I see tanks, he's got his big C5 up there looking, how many enemy tanks do you see? I can see 10, 9 or 10. And there's a little training area over there but he said they weren't there yesterday. And there haven't been any tanks in that area for the last three weeks. Well, as the day unfolded, there was a whole division up there and the fog finally cleared and that's another story. After it was over, we confirmed that we had a division, and they eventually went off and loaded on rail cars and went up to, the training area up north. But they were there so I had the guys go back in the Augsburg Border Station Take and the Border Station Take because the division that turned out was a division that was stationed over near Dresden and they had moved over to this area and went up north to train.

So it seems to me we went back over the tapes intercept stuff for the last, previous three weeks to see if we could find in the noise the signals that told us they were moving in there and we could not find it, they may have been there, but we couldn't find them couldn't identify them. Look at the Israelis in 1973, three times before that attack in October, they had partial mobilization in Israel because they thought they saw in the noise the signals that intended an attack. Did they? I've asked the Egyptians, One of the reasons the Israelis didn't pull the string on mobilization in October was that mobilization for them was terribly disruptive of the economy, it cost them a lot of money and they said to themselves, I talked to David Ellizol about this before he died, and he said we simply couldn't afford to mobilize again. Was crying wolf, and it was expensive and the economy and the whole

thing we can't afford it. Were the Egyptians smart enough to, to had the Israeli held back on the other three occasions would the attack have come sometime other than October the 6th? I don't know.

**MAJ Spencer:** Are you familiar with the Battlefield Deception Cells that are being fielded to the divisions and corps right now? I am concerned that these deception planners may be outside of the real planning nucleus and be on the periphery. It seems that the real players are the commander, the G3, and his plans and operations officers. Sometimes both, but normally the plans guy for the future and the ops guy for present execution. These three or four will stand at the map with grease pencils and the germ of an idea. When they step away from the map the central concept of the plan is complete. I'm not sure the deception planner will get into that meeting. Any thoughts on that, Sir?

**General Starry:** I think it depends on a couple things, it depends on the level of command your are at. It shouldn't be that way though. I don't know how they did Operation Overlord or what it cost them in terms of headquarters. General Patton ran some kind of deception headquarters. It was a full blown Army Headquarters wasn't it, that's all they did.

**MAJ Spencer:** He ran an Army Headquarters, they assigned paper divisions to it and even built some encampments and airfields. That was an interesting time because it was not a constrained resource environment, it certainly was a constraint but it wasn't what it today. The British had an outfit called London Controlling Station. It was the deception clearing house for Britain. It had ties to MI5 and elsewhere to coordinate. Churchill was involved

as well. He really enjoyed deception and was very adept at it. I have another question that is also interesting to me. You know Rand Arroyo did a study on deception at the NTC and found good units that are able to do everything else well generally integrate deception and are generally successful. That unit that can't manage to get their fire support and their barriers synchronized either don't do the section or when they do it just pulls away from something else. Following that do you think there are some trade-offs whether it be from echelon or whether just for specific missions you focus or whether you just say that I know this guy down here can do a good job of it, I know this guy will just make a mess of it, therefore I'm going to choose my players that way.

**General Starry:** Well, I guess that is important. I think it's important to look at if we're going to look at it doctrinally. I wouldn't look at deception, I wouldn't call it battlefield deception. But I think you've got tactical deception, you've got deception operations at the operational level, and you've got strategic deception operations. And, that may help a little bit in sorting out the national armies and so on. You pick some clever zealot who is good at cobbling up stories, some guys are clearly going to be better at this than others, There is no question about that. And he may end up with a better operation than the guy that's planning the real one. But some of them can be very simple tactical deception, my first battalion commander was a fellow named LTC Abrams, and we were a divisional tank battalion in an infantry division, a lonesome kind of operation. And we were, regiments of the division were staging their annual tests, AT, and we were grossly outnumbered. They'd given all the regimental tank companies to this guy and he had three tank companies and, the regiment was out there and we were supposed to defend this area woods. So what he did was, the regiment was two up and one back, boy he was standard right by the book. So we took a tank platoon, LTC Abrams took a tank platoon and a smart young lieutenant, college classmates, and that tank platoon drove around all night long in the woods in front of the two lead battalions of that regiment. They worked out a schedule before hand and they would drive so far in a certain direction, stop and you'd hear a gas can, jerry cans in those days, you had to knock the screwed cap, American cans you unscrewed it. So you could hear the guys hammering on those lids and then throwing all those empty cans back in the truck, you could hear all those things and of course you had the woods, it was foggy and sound carried for-ever-more and that's all they did all night. So about, 2 AM the regimental commander listening to all this, listening to all the input got so nervous that he committed his reserve battalion to the line. He moved a couple of companies over and he slipped them into the line and he figured he was getting a big attack, actually what he did was wench them over a little bit like this. While all this was going on with one platoon, and some trucks out here, we took the whole remainder of the battalion on about a forty mile road march around behind the regiment and the minute his reserve battalion was in place in the front we attacked them in the rear.

**MAJ Spencer:** Sir, thats all the time we have now. I want to thank you for your time and your opinions. Thank you very much.

## **Appendix C**

Interview with Dr. Edward Luttwak  
(Chevy Chase, Md, 3 December 1989)

**Dr. Luttwak:** Deception as an action, as an activity, consists of techniques. It arises from culture. Although over time you can educate an armed force if you do it through office training and all these other things. There are some *cultures*, military *cultures*, in which deception comes first then you design your operation around it. Your starting point is that you don't want to have a fair fight. You don't want to run into the enemy guns and that's an implicit starting point.

It comes naturally, therefore, that you cannot work with a deception scheme when you've come up with your deception scheme then you turn around and you start worrying about how your going to muster your forces what kind of orders your going to cut for your artillery, infantry and so forth. Then there are other kinds of cultures in which you make a plan your going to do this, your going to use your means to achieve this result and then having worked everything out you then around to the G3 and ask him to come up with some sort or deception plan that will mass that which you have decided to do. In the first instance, you are able to achieve major results by deception, in the second instance you have a marginal effect on deception.

Different armed forces are different in that regard. In the Soviet Army, for example, in the Second World War, as soon as they were able to acquire their balance (lets say the summer of 1942) they were still in retreat but they had recovered their balance enough to start acting coherently. Every single Soviet operation, every major Soviet operation conducted after the summer of 1942 was a deception first operation. Where they worked out how they were going to deceive the Germans (and at the very Japanese) and then they deployed forces accordingly.

In this sense what they were doing was very different from coming up with a plan and then trying to mask the plan with deception. The degree to which you want to use it, these *cultures* are formalized from some sort of ancient origin. They required a sense of vulnerability a weakness. The overwhelmingly strong set out to impose its strength on the minor. If willing to use deception, the minor could avoid some particular problems. The armed force that shows itself to be weak and not to have the means to impose its will on the enemy relies on deception because that is the only way it will be able to win the cause.

Indeed, you might say the very last Soviet Offensive against the Germans in 1945 was done without concern for deception. They gathered enormous amounts of artillery and took their time doing it. They assembled enormous amounts of ammunition. They no longer felt the need to use deception.

**MAJ Spencer:** They did successfully mask the large lateral movements of large forces such as at Oder-Vistula.



**Dr. Luttwak:** Yes they would still use it operationally, but it was not the pervasive use of deception. Not standardized. As for the Israelis they went deception first, in all their wars. But in 1982, when they were confronted by the Syrians, they thought they were overwhelmingly strong so they didn't try to deceive the Syrians for example by the axis of their attack. The characteristic Israeli thing to have done would have been for them to mass in the Golan Heights and attack elsewhere. But they thought they were overwhelmingly strong and they didn't do it.

To go to deception first involves doing the unexpected which involves doing that which goes against common sense, that which involves going against economy, means, straight forwardness, and all these other things. You have to go against common sense. Whenever you are doing what is expected you are doing something less efficient, you are doing something willfully inefficient. You are not taking the efficient route, you are taking the round about route. Your not efficiently mustering your means, you are doing it at the last minute. You are not moving troops, or not moving supplies in daylight. You do it at night when you lose half your sleep and all these other things. Every act of deception involves a willful inefficiency inflicted on oneself for the sake of doing the unexpected and surprising the enemy.

**MAJ Spencer:** That's been said loud and clear. but we don't always learn those lessons. FM 100-5 talks about surprise without telling us how to go about doing it.

**Dr. Luttwak:** You do surprise by writing down those things you have been taught to do for your given mission. Then you sit down and find all the common sense and all the logic, all the chances and methods that the Army prescribes. All the procedures. And you say this is the best common sense most efficient way of doing this job, the expected way of doing this job, so let me begin by reversing every one of these instructions and moves.

If I want to attack the west, I deploy and muster from the East. If I want to attack in daytime I prepare at night. You begin with that and then some of the things you prefer to do cannot be done at all. And you remove them and you then have your deception plan.

So perhaps 100-5 should be written out as an inverse document which in a sense is saying, I'm going to sort out all the proper and efficient ways of doing things in this document which add on to what you learned when you were in university, West Point, Command and Staff College, and now write out your orders, your war plan accordingly and then reverse it. Do it upside down and now you have a deception plan.

All the accomplished deceivers in history have relied on their enemies imprisonment by common sense. As soon as you get to higher levels of consideration. Above your personnel levels, strategic levels, fields of strategy, national strategy, the strategy of forces, air strategy, naval strategy, and so on. You are now entering into a somewhat different strategy area because you now have two allies not only one. The first ally you always have is common sense. Common sense is an ally that tells your enemy what you are supposed to be doing, which isn't what your planning to do. But at the higher levels you

have something else, and that is that the enemy cooperates in your deception, he is willing, he is an active part of your deception.

**MAJ Spencer:** By expectation?

**Dr. Luttwak:** Yes, more than common sense is involved. Not only because of his fixation on the common sense solution you have rejected, but also because he has certain expectations of his own. He has some desired end which may be political, or may be institutional in terms of support. Successful deceivers at these higher levels have the advantage that those whom they wish to deceive wish to be deceived.

For example, when the Soviet Union in the 50s was faced with the problem of competing with the United States in the long range delivery of nuclear weapons, the Soviet's could prove that the American's were not too far ahead in bombers, especially in navigation. The Soviets could build bombers but the terrific problem was getting and maintaining an operational bomber force. So they decided that they were going to emphasize, they were going to go into ballistic missiles which is technically much more arduous a course by which would to overcome these operational problems they had of navigating a bomber force and penetrating our defenses. They were very sensitive to the fact that our penetration depended on electronic warfare, which they felt they were totally out-matched in. So one of the crucial things they relied on, was that there would be no use for them to go into ballistic missiles if the Americans would be there first. The Americans were of course technologically much better placed to be first with ballistic missiles. But the Soviets used a deception plan and the deception that they worked on was to use a bomber program which they didn't take seriously, which was not there priority effort, using it as a deception.

The reason why it worked was because the U.S. Air Force loved bombers and hated ballistic missiles, and therefore was very willing to be deceived into thinking the Soviet weren't building missiles. The Soviets successfully deceived the United States into thinking that they were designing in long range bombers and concealing the fact that they were working on the ballistic missile. They could not have pulled off the deception if the U.S. Air Force and Air Force Intelligence didn't passionately want to believe that.

When the Germans successfully deceived the Soviet's about Barbarosa, they managed to pull off a surprise attack, a condition which should have been quite impossible. Here are the Germans ganging up the bulk of their armed forces and concentrating them as a mass of horse drawn carts. The first point is, there were lots of men, lots of horses, as well as some tanks, in fact, from Finnish Campaign to the Black Sea. The deception was possible because Stalin desperately wanted to believe that the Germans had done all this to blackmail the Soviet Union. He was expecting them to issue an ultimatum and make demands. His strategy was that the Germans would make big demands on the Soviet Union for territorial concessions, possibly huge, and that he, Stalin, would accept every single demand and there would be no war. That was his plan. That is why he was so concerned that a war might break out accidentally. That is why his only instructions and orders were for heavens sake don't open fire. In this case Barbarosa, if you were the deception officer for Barbarosa, you would conclude that you cannot mask Barbarosa. But

you could, because its done with cooperation. The victim always cooperates when there is a successful deception.

In the 1973 war the Israelis had gone through a very nasty experience of mobilization in the spring of 1973. Their only coherent course of action would be to either mobilize their forces and retain constant readiness or we have to make vertical concessions required to come to an understanding with Egypt. And there were these plans floating around essentially for the Israelis to give up the Sinai demilitarized. The Israeli government didn't want to come to political understanding with the Egyptians and neither did it want to keep the Israeli armed forces mobilized at all times. Therefore, it kidded itself, persuaded itself with a theory that the Egyptians could not launch a war because the indispensable requirement was a reasonable balance in the air. And they didn't have a reasonable balance in the air and therefore couldn't launch an attack. They put themselves in willful complicity with the deception by this phenomenon. The Israeli conception was the Egyptians could not win, therefore they assumed they could not attack. It didn't occur to them someone could attack even though he could not win.

So what we're dealing with is that, as the deceiver you have the three basic factors involved; first, the deceiver's orientation: do you have a deception culture or do you have an action culture with deception as a subset? If it is the latter, then deception should by all means be pursued but don't have any illusions that its going to be very important or successful. If you go to deception first you can probably overthrow the military balances and achieve completely expected results. Second, common sense is your enemy when your planning your own deception. Whenever you follow common sense you are not deceiving you are doing the expected. The enemy's common sense is your ally. Also whenever political considerations cause the enemy's passionate desire to be deceived, you have the possibility of deception.

**MAJ Spencer:** Let me ask a question about the 1973 War? How much of that do you think was Egyptian culture prosecuting the deception as opposed to Soviet advisors showing them a way to achieve a stunning surprise victory against the Israelis?

**Dr. Luttwak:** After the spring mobilization the Egyptian armed forces were ready for attack. They were not totally ready but they were 95% ready to launch a war. Once they saw the Israelis were not staying either fully mobilized and had initiated the dialogue to avoid the war, then at that point things became relatively easy and the deception the Egyptians engaged in was reasonably simple. There was no need to believe, no need to assume, that the Soviets advised them. The Soviets did advise the Egyptians to carry out such ever since 1955 in a sense. They advised by instructional training methods, its military and its political implication and so forth. I'm sure they communicated to the Egyptians that the Israelis were such an easy mark. The only way the Israelis could function would have been to have ask for mobilization upon every indication of war. In which case they would have had the mobilization on every single day.

What they didn't realize, what the Chief of Intelligence himself did not personally realize was that in the circumstances the only thing he could do was go to the cabinet and say, cut my budget because I'm no longer capable of predicting attack. The Egyptians are 95%

ready to launch an attack. I can never give you enough warning to avert surprise. So either you negotiate your way out of this or you organize a permanent mobilization because I can't help you anymore. You know if you have a house and allow somebody to set up a piece of artillery in your front lawn pointed right into your house and then try and avoid being caught by surprise. You can't, everything is pointing at you. That was established not when the gun was fired but when you allowed the calculations and assessments that led him to set up the gun in the first place.

Now this thing about *culture*. I have spent a lot of time around with armed forces. I've been on patrols with the Israelis, Koreans, Salvadorans, Finns, with all sorts of armed forces over the years. I've noticed how, in some of these armies, routine is the essence of the activity. That's associated with a desire to be orderly and be efficient. Their routines are all exemplary and spring from their cultures desire for efficiency, order, making proper use of personnel, being careful with government property, and all these other things. For these sorts of forces deception is extremely difficult. Deception is an awkward made-up thing, a willed thing, a hard to do thing. Which is done very imperfectly and inefficiently.

Other armed forces which are not procedure oriented, but are goal oriented instead there job is to do this or do that and then they do is, they focus on another goal for awhile. For this sort of unit deception comes naturally.

General Dozier applied deception at first in Verona, Italy. He was supposed to apply a very elementary form of deception which was to vary his time when he goes to the office, and various other habits. Not to do certain things at the same time. Dozier used to go jogging exactly at the same time every morning and he maintained a routine. He could not keep himself from doing it. He is the product of a military structure in which procedures, routine and suchforth came natural. He was uncomfortable with the idea that he should wake up in the morning and decide when he should do what.

**MAJ Spencer:** Are the Soviet's hampered because they are generally a very regimented group?

**Dr. Luttwak:** The Soviets are very regimented, but they are also flexible! They are the most flexible people in the world at the upper levels and the most regimented at the lower levels. To give an example of regimentation, the Soviet concept of discipline always assumes that if there is no discipline there will be anarchy. But to give an example of flexibility, when the ballistic missile showed up and we had qualms as to who they should belong between the artillery, the Navy the Air Force. The Soviets created a strategic weapons force. This is exemplified even in the echelonment of their forces. On one hand you have rigid intractable formations of soldiers and on the other you have the front which is totally flexible.

General Doziers responsibility was to do liaison wherever possible and he was living in an area which was called beautiful city, which was full of culture, he could very easily have organized his life around the necessary jobs he had to do. Nobody asked him to go to the office at 8:00 in the morning, there was no need for him to be there.

I once spent some considerable time with an Israeli paratrooper battalion, whose job was to stop infiltration around the Jordan River. This was a long time ago before the barrier. The battalion kept trying to refocus on the infiltration, who comes, when he comes, and they come with solutions for it, ambushes, patrols, interceptions. And they were constantly fighting this problem. I was with the Koreans who were doing camp infiltration during infiltration of the Korean DMZ. For them everything was absolutely pink, it was all procedure it was patrol goes out at 0500 hours and suchforth. I could cross the Korean DMZ anytime I wanted. All you have to do is observe the routine and find the gaps and go through them. If you try to infiltrate through the Israelis, you may get through as well, but you can't predictably get through because you don't know what they are going to do next. But at the same time the Korean Army is very disciplined, whereas these Israelis looked like an encampment of ruffians. The battalion commander was shackled up with several Army girls in one of the rooms upstairs and the soldiers were cooking and eating all the time and there were tin cans lying around. They were not there to be respectable, they were not there to be neat, they were not there to be disciplined. They were there to stop infiltration. The officers were sitting around tossing empty cans over their shoulders and figuring out what happened yesterday and the day before and how they should act tomorrow and thereafter. There was no routine at all, in fact it wasn't the case of setting up a routine there was just no routine.

**MAJ Spencer:** How do you think we ought to handle that in our Army, which is, of course, very routine bound?

**Dr. Luttwak:** In the case of forces like your light infantry, which will live or die according to their ability to see the enemy. There should be a deliberate lessening of routine and procedure and there should be a cultivation of the innovation and spirit. Even in the British Army which is a very disciplined Army the light infantry has this style, there is a distinct style, which is more informal between the officers and the NCOs. And improvisational. And I think a tradition, I think, of leaders who establish themselves imaginatively.

**MAJ Spencer:** Are we likely to waste more time than we're going to gain?

**Dr. Luttwak:** In doing what?

**MAJ Spencer:** In accepting deception as something that we ought to do all the time. There is a movement in that direction. There is a great concern with the commitment of intelligence assets to get the necessary feedback.

**Dr. Luttwak:** I didn't want to get into this so much. This is the greatest absurdity of the deception routine. Making sure that the enemy is being deceived. So you need penetration of the enemy, you need to observe the enemy. But there are real phenomenon congruent and supportive of a huge military initiative which they are working on. Which will produce a new form of warfare on a huge scale. Which is out matched them by a totally different mode of warfare. And they are working on that now. -

**MAJ Spencer:** Do you mean plasma fusion and all the other different weapons systems that are out there on the horizon?

**Dr. Luttwak:** I say that they are creating a new form of deception or surprise because what they are doing is against common sense. Its also against the current designs of our armed forces.

**MAJ Spencer:** That is most intersting sir. Thank you for your time.

## **Appendix D**

## The German Misapprehensions Regarding Overlord: Understanding Failure in the Estimative Process

T.L. CUBBAGE II

From the German perspective, the D-Day invasion of Normandy on 6 June 1944 came as both a strategic and tactical surprise.<sup>1</sup> Within the context of the Second World War and the German intelligence analysis and command decision apparatus, this article seeks to examine the vital questions: what are the root causes of failure in the estimative process, and why does strategic surprise appear inevitable?

Some popular historians have labeled the failure of German 'intelligence' regarding the Normandy landings as one of modern history's most extraordinary military blunders. In fact, there was nothing 'extraordinary' about the *Wehrmacht's* apparent unreadiness for the main Allied assault, the *Schwerpunkt*. Rarely has a nation at war been more expectant of invasion. By late April 1944, Radio Berlin had broadcast to the German people that an enemy invasion in France would come at 'any minute, anywhere'.<sup>2</sup> On 18 May Radio Berlin announced that 'the ports [of England] are bristling - crammed to bursting point - with ... invasion equipment'.<sup>3</sup> The Germans certainly expected the *Grosslandung*; and yet, the critical details of their expectations simply were wrong. Though the Germans expected a diversionary attack to be made in Normandy, they were absolutely convinced that the *Schwerpunkt* would come in the Pas-de-Calais sector. Everything was set to await the arrival of the Allied forces north of the River Seine - where, in due course, Hitler and the *Wehrmacht* would destroy them. But, in their effort to build and man the *Atlantikwall*, the Germans made one critical mistake - one the French had made some years earlier. They forgot that a concrete and steel barrier with an exploitable weakness is no shield at all.

While this article is by no means a historical summary of the Normandy story, it does contain sufficient factual information to highlight the major threads of development and errors existing in the German pre- and post-invasion estimates.<sup>4</sup> As will become apparent, there is nothing unique about the factors that inhibited the German perceptive process; nothing to make the factors inapplicable outside the historical context of the war or the invasion. In fact, ten very

common factors have been identified which, alone and in combination, formed significant blocks to the ability of the Germans to perceive correctly the Allied intentions. Stated in their simplest form, these are: 1) the human factor; 2) the bias factor; 3) the expectation factor; 4) the options factor; 5) the plausible interpretation factor; 6) the distraction factor; 7) the intelligence collection factor; 8) the deception factor; 9) the time factor; and 10) the organization factor.

### GERMAN COLLECTION AND ANALYSIS CAPABILITY

Niccolò Machiavelli - who must have understood the concept of coincidence perfectly - believed that history proved that no great public misfortune occurred without being foretold, and that such prophecies should be sought out and employed by the ruler.<sup>5</sup> In the Normandy story one-legged General Erich Marcks, who commanded *Armee-korps* 84 in the Normandy sector, played the part of 'Machiavelli's Prophet' - proving as always that it is hard to be a prophet in your own land. Inspecting the fortifications at Arranches-les-Bains, on Thursday, 1 June 1944, he looked out to sea over what the British called Gold Beach, and told an officer with him: 'If I know the British, they'll go to church next Sunday one last time and then sail Monday. HGK B says they're not going to come yet, and that when they do come it'll be at Calais. So I think that we'll be welcoming them on Tuesday [6 June] right here'.<sup>6</sup> The problem then, as in the days of *Il Discorsi*, was that no one could recognize such casual observations as having historic significance until it was too late to matter.

By late 1943 the Germans understood that the Allies would invade the Western Front sometime in 1944. And yet, in spite of the fact that the Germans had a broad collection capability and a diverse analysis apparatus, Hitler and the *Wehrmacht* were never able to recognize and appreciate properly the key elements of the Overlord/Neptune invasion plan.<sup>7</sup> Nor could they deduce the correct time and place of the Anglo-American landings. At various times from between early 1943 and 6 June 1944, the Germans saw indications of, and gave credence to, the dangers of invasion in: the Balkans, Italy, Southern France, Spain, Portugal, and along the Biscay coast of France; also in Brittany, on the Contentin Peninsula, in Normandy, and the Pas-de-Calais; and even in Belgium, Holland, the Skagerrak, and Norway.

Asked by Japanese Ambassador Oshima in January 1944 where he thought the enemy would land, the Führer answered: 'Beyond a doubt the most effective area would be along [the shores off] the Straits of Dover, but to land there would require much preparation and the difficulty would be great. I don't think the enemy would run such a risk'.



Hitler admitted to the Ambassador that it would be 'impossible' to prevent the enemy from landing 'somewhere in the West', but he declared that Germany would nevertheless 'absolutely stop any real second front'.<sup>9</sup>

Between 1941 and July 1944, the major German command and agency analysis centers had at their disposal a quantitatively if not qualitatively impressive volume of information relating to the Western threat from which they put together pre- and post-invasion estimates.<sup>10</sup> A brief review of how the Germans answered the four basic questions that faced them will aid in understanding their failure to anticipate correctly the Allied plan.

#### THE GERMAN ESTIMATES

- *The How of Attack.* By June 1944 the Germans had decided that the Allied invasion scenario called for several attacks. Hitler was firmly convinced that the enemy would stage several large diversions in addition to delivering the *Schwerpunkt* or main blow.

- *The Where of Attack.* Hitler believed that the first major diversion would come in the Normandy-Contentin Peninsula sector; the second diversion in the Brittany sector; and the main assault in the Pas-de-Calais sector.

- *The Date of Attack.* Initially the Germans decided that the invasion landings would begin on 18 May 1944. The exact date was established on the basis that the landings would be made on a high tide coinciding with dawn. When the expected invasion did not come in May, estimates varied as to the next most probable time. At first it was believed that the invasion would not come before mid-June. Bad weather developing over France on 3 June made an imminent attack appear very unlikely. *Heeresgruppenkommando B* (HKG B) and *Oberbefehlshaber West* (OB West) thought that the landings would be in either mid-July (Rommel's view at HGK B) or mid-June (von Rundstedt's view at OB West). Then, on the evening of 5 June, additional indicators pointed to an attack before 8 June. However, only the divisions subordinate to *Armeeoberkommando 15* (AOK 15) in the Pas-de-Calais sector were put on full alert.

- *The Strength of Attack.* Estimates varied of the size of the enemy forces in England and the number of divisions that could participate in the initial assault waves. Rommel's staff at HGK B believed that the Allies had about 65 combat-ready divisions in England (actually, of some 35 Allied divisions in England, 29 divisions were assigned to the Overlord plan). The staff at *Oberkommando der Kriegsmarine* (OKM)

estimated that the Anglo-Americans were capable of simultaneous landing on a 25-division front. The *Oberkommando der Wehrmacht* (OKW) staff thought the enemy could land on a 15-20-division front, or make several strong diversionary landings in multi-division strength followed by the main blow.

When the landings began in Normandy, the Germans were at first uncertain whether it was a raid, a diversionary attack, or the main attack. By mid-day on 6 June, the Führer had decided that the landing was the strong diversion that he had predicted would come in Normandy, and not the *Schwerpunkt*. Hitler reminded his staff of his prediction, saying that his warnings had proved well-founded.<sup>11</sup> He then warned of the imminence of a second diversion in Brittany and of the main attack in the Pas-de-Calais sector. At the mid-afternoon Führer Conference, *Grossadmiral* Karl Dönitz argued that if there was to be a second seaborne assault it probably would not come in Brittany, but Hitler insisted that it would.<sup>12</sup>

As time passed, the *Wehrmacht* commanders in France became convinced that the Normandy invasion would be the only Allied landing; but Hitler - directing German war operations from his headquarters 1000 kilometers to the east at Berchtesgaden - would not accept that view. As late as 8 July, the Führer was still warning of the danger of attacks in Brittany and north of the Seine in the Pas-de-Calais sector. On that day, in a new directive for the conduct of operations in the West, Hitler noted:

the enemy probably will attempt a second landing in France in the *Armeeoberkommando 15* sector [which was the Pas-de-Calais area], all the more so, as public opinion [in England] will press for the elimination of the long-range [V-1 pilotless flying bomb] weapons firing on London. The disposition of the forces still available in England suggest attacks primarily against the sector between the Somme and Seine [Rivers],... but [attacks] also [are possible] against [both] Belgium and Southern Holland. At the same time, surprise attacks designed to effect the capture of one of the large ports of Brittany cannot be ruled out. Similarly, an attack against the French Mediterranean coast also may be expected.<sup>13</sup>

It was his belief in, and real fear of, a second attack which caused Hitler to hold back from the fight in Normandy all of the numerous strong divisions stationed in the Pas-de-Calais sector. If they had been committed immediately to the counter-invasion battle, these units well might have played a decisive part in the battle for the beachhead. It was not until 25 July that the Führer authorized OB West to move some of

the AOK 15 units into the battle in the AOK 7 sector, but by then it was too late.<sup>14</sup>

#### THE ROOTS OF FAILURE

In the context of the times, and from the German perspective, there was no irrationality in the developing process that produced the pre- and post-invasion estimates concerning the impending June 1944 D-Day landings. Some writers have pointed to certain very specific indicators – the lines from Paul Verlaine's poem, '*Chanson d'Automne*', in the *messages personnels* broadcast to the French resistance being the most popular choice – and characterized them as so absolutely unequivocal that as indicators they should have over-ridden any assumed level of wartime confusion in the analysis process. Nevertheless, on close scrutiny, each of the so-called clear warnings, in the context of January to June 1944, were not only ambiguous but often patently inconsistent with other apparently unequivocal information.

Consider, for example, the impact that the inclement weather during the first few days of June had on all the other 'obvious and unequivocal' warnings of an impending attack. On 6 June 1944 Admiral Theodor Kranke, *Chef, Marinegruppenkommando West* at Paris, noted in his *Kriegstagebuch*:

The enemy has certainly succeeded in surprising to a certain extent the whole machinery of the German defense organization; and not the least by the clever choice of a period to land when the weather appeared to be [very] unfavorable, but kept improving.<sup>15</sup>

Much of the incompetence or wanton neglect imputed to the Germans and their several intelligence services has resulted from a suppression or ignorance of the many intelligence indicators that logically pointed to greater invasion dangers in every quarter except Normandy. Furthermore, many of the histories were written before the declassification and public release of the details of the Fortitude deception plan,<sup>16</sup> the Double-Cross agent operations<sup>17</sup> and the Ultra-Magic signal intelligence.<sup>18</sup> Indeed, when all factors are considered, it is hardly fair to say simply that there was a German 'intelligence' failure. To be sure, there were numerous notable intelligence collection failures. But, and of more significance, the Germans' 'failure' was also one of analysis and acceptance, i.e., product use; it involved both the German intelligence services and the command centers.<sup>19</sup> The 'failure' involved the Führer, *Wehrmacht* officers in Germany and France, and the men of *Abwehr* and the *Reichssicherheitshauptamt* (RSHA).

Any study of the intelligence process must accept that correct

information, told in time yet not believed or not acted on, is no intelligence at all.<sup>20</sup> One of the most critical phases in the intelligence cycle lies in persuading the military and political leadership to make timely use of the information and analysis furnished to them.<sup>21</sup> The Germans never succeeded in this regard.

It must be understood that certain circumstances arise in the context of preparing military estimates which tend to form blocks to proper perception, and so make an already difficult intelligence task seem virtually impossible. While strategic surprise seems inevitable, it is too easy to allow that conclusion to follow merely from the difficulty of the task of analysis and acceptance. But, once the blocks that impeded the German perception capability are identified and their roots understood, it will be possible to appreciate better – if not understand fully – why the Germans failed to anticipate the Allied intentions. The ten perception blocks identified in this article are expressed in terms of blocking factors – factors which cloud men's minds when they try to see into the future.

#### 1. The Human Factor

One very basic cause of the German inability to perceive the relevant indicators of an Anglo-American *Schwerpunkt* in the Normandy region was the human factor. If men are to perform the task of analysis and acceptance – for what machine can do the job? – then it must be accepted as inevitable that mistakes will be made.

An examination of the human factor means focusing on a few of the key people involved in the intelligence and command apparatus, for 'ultimately, the idiosyncracies and personality of each leader play a definite rôle'.<sup>22</sup> In 1944 in Germany the key man was Adolf Hitler. As Führer, he was both the chief intelligence analyst and ultimate command policy-maker.<sup>23</sup> The important secondary figures were Rommel at HGK B, von Rundstedt at OB West, Jodl at OKW, Schellenberg at RSHA/SD, and Bormann at *Führerhauptquartier*. At the tertiary level, the cast is legion. In discussing the human factor it will suffice to focus on Hitler in particular, and the German officer corps in general.

In matters of intelligence analysis and command policy-making much depends on whether leaders are open-minded, especially to receiving unpleasant information, and freely encourage criticism.<sup>24</sup> As Michael Handel pertinently observes:

Leaders in a democratic system are generally more inclined to consider a wider variety of options than those who have always functioned within authoritarian or totalitarian political

systems. In authoritarian countries, where the climb to the top is an unrelenting struggle for power, habits of cooperation and openness are usually less developed. The prevalence of ideology naturally restricts openness to variety, criticism, and consideration of contradictory ideas. Leaders in totalitarian countries ordinarily have little tolerance for ideas that deviate from the 'party line', since such ideas are seen as personal criticism – as a dangerous element undermining the existing ideology.<sup>25</sup>

As an example of totalitarian leadership, the Führer's attitudes and pattern of rule corroborate Handel's observations. Hitler was able to create and remain within his own closed and private world, from which the ugly and awkward facts of Germany's wartime situation were systematically excluded.<sup>26</sup> He simply refused to credit any report which contradicted his view of Germany and its role and position in the world, or its capabilities on the battlefield.<sup>27</sup> Hitler's staff at the *Führerhauptquartier* perceived their duty to their leader as to maintain his *Nachwandlerische Sicherheit* – his sleepwalker's sense of security.<sup>28</sup>

The power of Martin Bormann, Hitler's personal secretary, was built up on the skill with which he pandered to his weakness, carefully keeping back unpleasant information and defeating the attempts of those who tried to make Hitler aware of the gravity of the situation.<sup>29</sup>

With that view the RSHA/SD regulated the information forwarded for the Führer's attention – operating on the assumption that Hitler wanted reassurance rather than the truth.<sup>30</sup> In this cosmic isolation Hitler made most of his decisions without consulting anyone on his personal or military staff.<sup>31</sup> It is little wonder that in December 1943 *Feldmarschall* Rommel was moved to denounce the *Atlantikwall* and the concept of a *Festung Europa* as a cloud cuckoo land illusion: the figment of Hitler's *Wolkentucktsheim*.<sup>32</sup>

Klaus Knorr makes an especially important observation about the critical problem of interaction between the intelligence and the command decision staffs:

While intelligence organizations are largely manned by professionals with expertise related to the warning function, top decision-makers are not, and have not been trained in the business of reacting to and acting upon warning. They have arrived at their positions on the basis of quite different skills, and their staffs have been selected on the basis of criteria that are for the most part indifferently or not closely related to the matter of responding to strategic warning.<sup>33</sup>

In this context, Hitler and his staff of sycophants can be viewed as merely the extreme case of a general mental disposition on the part of decision-making staffs.

In contrast to the situation today where large intelligence organizations and staffs are the rule, none of the major powers entered the Second World War with a trained, standing professional military intelligence corps. The *Wehrmacht* approached the problem as simply one of military staffing where one officer ought to be as good as another. However, in practice most *Wehrmacht* intelligence officers (*Ics*) were regarded as *die Mädchen für Alles* (maids of all work). That this could include war diary, morale, propaganda, and censorship duties as well did not make the *Ics*' position a distinguished one.<sup>34</sup> The RSHA/SD approach to military intelligence was not much different.

As Donald McLachlan has noted: 'Certain professions, certain kinds of university study, [seem to] develop just those mental skills that intelligence work requires; what is [much] more important, they encourage ... confidence in the making of [difficult] judgments'.<sup>35</sup> In other words, professional soldiers, it is implied, do not have the right attributes for strategic military intelligence. The need for obedience and subordination, and the rank consciousness in all uniformed services make it difficult for career military intelligence specialists to make bold assertions: the system does not tolerate what is often viewed as insubordinate behavior, and few career officers want to risk their reputation and advancement on a long-shot prediction.<sup>36</sup> Michael Handel has summarized what the 'gifted amateur' can bring to an intelligence service:

Amateurs frequently bring with them new enthusiasm, a creative imagination, informality, perhaps some academic openness, and a somewhat more detached and objective search for *veritas* – all of which are intellectual qualities highly useful for intelligence work in general and deception work in particular. This fresh start allows them to reexamine old problems from a new point of view, unlike the pre-war professional intelligence bureaucrats: they were not obligated to commit themselves to earlier, not always fully rational, traditions or to old policies.<sup>37</sup>

A close look at those in the *Wehrmacht* and RSHA who were involved in the intelligence analysis and warning process does not reveal a strong cadre of well-trained or experienced intelligence officers.

Beyond the problem of training and experience is the issue of personal attitudes. How do the analysts and policy-makers view life in general? According to Michael Handel, the 'early and easily attained military successes caused the Germans to feel vastly superior to their

adversaries, to feel that they were immortal ... [which], combined with their traditional nationalism, assumed racial superiority and ethnocentric view of the world, reduced their incentives to learn about others'.<sup>38</sup> Hitler had a particularly dangerous aversion to being on the defensive. His expansionist vision of Germany's destiny made him steadfastly refuse to retire voluntarily on any front,<sup>39</sup> even denying his frontline commanders freedom to maneuver when on the defensive.

Driven by his view of Germany and his historic rôle in creating the Third Reich, Hitler ceased to acquire and evaluate the evidence – intelligence or otherwise – available to him. All his judgements sprang from his belief that he was the leader of an irreversible historic movement. Accordingly, he had no need for intelligence, for if – as he believed – his was a divine mission, there could be only one outcome: total victory over Germany's enemies. For Hitler and the Nazi regime, there was no room for the notion that 'intelligence can and should be the voice of conscience of his staff'.<sup>40</sup>

The observation that Hitler made most of his decisions without consulting anyone implied that not even the intelligence staff at OKW/WFSt was consulted. Hitler disliked intelligence reports, partly because he believed they were only evidence of the enemy's deceptions.<sup>41</sup> Most of all he distrusted signal intelligence, regarding it as an obvious vehicle for the practice of deception. The Führer also had an ideological bias regarding intelligence reports.<sup>42</sup>

John Campbell has put the intelligence situation *vis-à-vis* the Führer in the following perspective:

Hitler's attitude toward intelligence was at best ambivalent. Intelligence at variance with his governing *Wunschbild* stood a good chance of rejection as defeatist; at times, according to [General] Warrenton, the clearer the information about enemy intentions the more Hitler was inclined to doubt it. [Oberst Alexis von] Roenne[, *Chef, OKH/Fremde Heeres West*] was summoned to [the *Führerhauptquartier* at] Rastenburg only two or three times a month and might then be granted only ten minutes of [General] Jodl's time. Hitler never saw him at all.<sup>43</sup>

Paul Seabury adds to the understanding of Hitler's bias:

Hitler, for example, 'did not decide to occupy the Rhineland or Austria or to attack Czechoslovakia or Poland because any incoming information ... exposed an opportunity.' Instead the basic decision [to act] was made and then intelligence was gathered in order to determine the techniques to be employed.<sup>44</sup>

For Hitler, intelligence was not important, except at a tactical level or

as a counter-intelligence tool. It was not seen as a policy-making or strategic planning tool.

Moreover, 'the more conservative German officer corps strongly resisted the integration of intelligence officers into the *Wehrmacht*. ... This conservatism, tradition and aversion to civilian intellectuals did not allow them to tap the enormous intelligence potential of civilian amateurs'.<sup>45</sup> When they were on the offensive – sometimes only in the Führer's imagination – Germany and the *Wehrmacht* simply neglected the strategic intelligence function.<sup>46</sup>

This fundamental neglect of intelligence perfectly suited the elite of the German officer corps. They believed that aggressiveness from which [the neglect] ... stemmed protected Germany and thus their livelihoods from foreign dangers. Inside Germany, however, in the army, they did not merely ignore intelligence; they fought it. For intelligence threatened their jobs.<sup>47</sup>

To recognize the need for intelligence was simultaneously to acknowledge its importance. From that would follow the need to create a new kind of officer to deal with it. In the end, it would rob the traditional *Wehrmacht* officers of their power and *raison d'être*.<sup>48</sup>

The *Wehrmacht* officer corps was not unique in that regard; nor was Hitler's attitude about intelligence. Historical evidence supports Donald McLachlan's observation that 'men of action, [and] the commanders in operations tend at first to be suspicious or even contemptuous of intelligence unless they have experience of its methods'.<sup>49</sup>

Having good intelligence is one thing; being able to understand its significance and apply it to the conduct of battle is quite another. *Feldmarschall* Rommel, for one, knew how to make good tactical use of quality intelligence – when it was available, as, for instance, in North Africa. 'He never sent his troops into action without careful thought. Meticulous collection of information and reconnaissance, often carried out personally, always preceded an operation'.<sup>50</sup> In that theater he was well served by the tactical intelligence collection efforts of the combat Y-Service of the *Wehrmacht* which provided radio monitoring and radio direction finding information.<sup>51</sup> When Rommel went to France in December 1943 he discovered that he would have little reliable information for his use in defensive planning.

Much has been written about Hitler's uncanny intuition and amazing good luck. Throughout the 1930s and into 1941, Hitler acted on political hunches. Time after time his decisions turned out to be right. His many successes confounded friend and foe alike. It was the political successes that eventually encouraged Hitler to apply his intuitions to the battlefield as well.<sup>52</sup> Yet Hitler's 'good luck and uncanny intuition'

was nothing more than an astute political appraisal of the timid leaders of France and England, and their unwillingness to call his bluff. When the bullets actually started flying that political astuteness counted for nothing.

Intuition is an interesting concept: 'the word implies that understanding can take place without the reason intervening. This may be true in the Arts and in religious experience, but in military matters it is nothing more than "hunch"'.<sup>31</sup> In the business of military intelligence there is no substitute for an analytical framework which allows for an orderly and objective arranging and weighting of the best evidence.<sup>34</sup>

To sum up, when the variety of individual preferences and prejudices are multiplied by the number of people involved in the German intelligence collection and analysis and decision-making systems, then the importance of the *human factors* becomes readily apparent. Sometimes men of diverse views and experience work well together and their diversity provides a complement, making for a better collective judgement. That did not happen in Germany and occupied France in 1943 and 1944.

Many German intelligence analysts did what they could to make proper use of the available intelligence. The *Wehrmacht* officers, particularly those serving in France, seemed to have paid due regard to the military intelligence information they received. It cannot be said that Hitler made good use of intelligence. But what is most interesting about the Normandy landings was that no one on the German side ever realized what the Allies were planning to do. Before the actual landings one does not see a situation in which Hitler believed one thing and the others something else. The fact that the Germans erred in their estimates cannot be persuasively explained by accusing Hitler, the *Wehrmacht* officers, individually or as a group, of conspiracy, neglect or simply stupidity.

Little care seems to have been taken by the Germans in the selection of their intelligence officers, or in training the commanders who made the final assessments of the situation. As a result the quality of their intelligence collection and strategic analysis was poor. Some may be tempted to speculate that if all the Germans who played a part in the development of the pre- and post-invasion estimates had been trained intelligence officers, better estimates *might* have been produced. Though the lack of a formal intelligence training may have derogated the intelligence analysis acumen of some of the key men involved, it was certainly not the whole cause of their failure. Consequently, there must have been, and indeed were, other important factors which influenced the German ability to perceive and act on the relevant indicators.

## 2. The Bias Factor

The bias factor opens new vistas in the study of the more general humanistic factors as they affect intelligence estimates. The central themes here are the patterns of erroneous perception and judgement, i.e. 'biases' or errors in judgement that are consistent and statistically predictable in the sense that in a large number of cases, most people will be influenced by such tendencies most of the time.<sup>35</sup> There are many biases, but most can be grouped into four general categories: cultural; motivational; cognitive; and perceptual.

- *Cultural*. Cultural biases – *arrogance* and *projection* – are rooted in the basic predisposition inherent in the analyst's cultural values and heritage.<sup>36</sup> Projection and arrogance are reciprocal cultural biases. Arrogance causes the analyst to think he and his party or nation are better than others; projection causes him to see other men as beneath or behind him. Both are cultural mental defense mechanisms. As Kenneth Booth points out, if the analyst knows too much about his adversary, the truth may be too frightening for him to comprehend, and a demoralization – the Hamlet syndrome – may result.<sup>37</sup>

*Arrogance*. As a cultural bias, arrogance has special relevance to the study of German intelligence estimates and command decision-making. Arrogance distorted the German view of the world into an unreal one, which, in turn, resulted in many harmful decisions.<sup>38</sup> National arrogance was echoed in Hitler's personal arrogance when he told his Foreign Minister, von Ribbentrop, that 'when he had to make great decisions, he considered himself to be an instrument of [divine] providence which the Almighty had determined. He [added] ... that before big decisions, he always had a feeling of absolute certainty'.<sup>39</sup>

In early 1944, at the age of 54, Hitler had no habits of co-operation or of orderly staff work, and was incapable of disciplined or systematic work.<sup>40</sup> He simply imposed his ideas on others. Early successes in the face of senior German military and foreign policy opposition convinced him that his intuition was infallible.<sup>41</sup> The Führer did not, in his own mind, need intelligence. He *knew* what would be the outcome of his decisions and had no need for intelligence estimates – particularly contrary ones.

*Projection*. The concept of projection relates to the tendency of human perceptions to be ethnocentric. That means seeing the external world inside out, which typically involves the projection of one's own belief systems, and, by definition, causes the underestimation, if not the denigration, of one's opponent's culture, motivations, intentions, material and technological achievements, and the capacity to identify

with others.<sup>63</sup> The Germans' projection of their belief in 'Aryan superiority' made it appear to them that none of their adversaries would prove more than minor nuisances on the battlefield. Their experiences on the plains of Poland and the fields of France gave their new *Blitzkrieg* doctrine the appearance of the ultimate concept.

- *Motivational.* Motivational biases, such as *risk-taking* and *over-confidence*, result from the influence on judgement of ambitions and fears, and the need for men to perceive their past behavior as commendable and consistent.<sup>64</sup>

*Risk-taking.* Whenever decisions must be made in the face of uncertainty there is an element of risk, and a decision to go forward with a plan of action in the light of the risk involves an element of 'gambling'.

When it comes to gambling, we must distinguish between *the considered gamble* and *the pure gamble*. A considered gamble is based on a calculated risk and is decided upon only after careful consideration of the pros and cons in the light of prevalent uncertainties. A pure gamble occurs when an actor is inclined to gamble as a matter of personality, or because he perceives viscerally that there is no acceptable alternative ... and will plunge without a careful prior evaluation of the problem or when the calculated risk would be forbidding to the purely rational decision-maker.<sup>65</sup>

Practical experience confirms that in the real world *considered* and *pure* gambling occur in various mixtures. Without question, Adolf Hitler was predisposed to *pure* gambling. At no point – even after the most serious defeats – did the Führer ask for or encourage better intelligence analysis to aid him in making major decisions, for in his mind he had no need of it.<sup>66</sup>

In the late 1930s the senior officers of the *Wehrmacht* were generally disposed to be risk-averse. The early successes and Hitler's 'luck' changed all that. By 1941 the senior *Wehrmacht* officers at OKW were inclined to high-risk 'fuzzy' gambling – taking action where the frequency of the occurrence of low probability events is highly variable, and where the extent of the commander's control over the amount of reliable military intelligence about the combat environment is severely limited.<sup>67</sup>

This propensity is, and must be, in the nature of military line officers.

To paraphrase Walter Warlimont:

This was in the best tradition of the soldier. Such heroic determination in battle had given the Prussian-German army many a

victory and much more besides. But when it turned into a political code of conduct, as at the end of the First World War and during the Hitler period, it leads to irretrievable disaster. For what in the soldier is the height of courage, in the statesman is likely to be irresponsible temerity.<sup>68</sup>

It was this sort of unjustified arrogance which caused the senior *Wehrmacht* officers to lose touch with reality.<sup>69</sup> They were carried along with Hitler's pure gambling, and any need felt for good strategic intelligence simply disappeared. Thus, for them the strategic intelligence estimate became – if anything – simply a rationalization for what they were bound and determined to do; tactical intelligence was used after a decision was made.

*Over-confidence. (Hubris).* Over-confidence – that feeling that the other side would not dare – is said to be the most frequent cause of surprise.<sup>70</sup> Certainly it tends to breed vulnerability.<sup>70</sup> 'Swaggering tends to produce self-intoxication, and along with it an inflation of one's strength across-the-board', and such an enhancement of self-esteem tends to lead to even greater self-confidence, and produce even more aggressive attitudes toward an adversary.<sup>71</sup>

Hubris – the central theme in the Greek tragedies – is the zenith state of over-confidence, connoing a pride and insolence so extreme that in ancient times the infuriated gods would strike men down at the height of their success. One must understand the tremendous risks taken by Hitler in 1936–40, and appreciate his apparent good luck, in order to comprehend the hubris that prompted him to take even more impossible chances in his air attacks against England and land attack on Russia when his luck ran out.<sup>72</sup> When men like Hitler are being swept along in a hubristic state of mind, strategic intelligence becomes, at best, no more than an unnecessary distraction.

- *Cognitive.* The cognitive biases result simply from the way the mind tends to work and not from any intellectual or emotional predisposition toward a certain judgement.<sup>73</sup> The *attribution of causality*, the *estimation of probability*, and the *evaluation of evidence* all merit discussion.

*Causality.* This aspect of the cognitive bias affects the way the mind arrives at attributions of causality. An analyst can see a plane or a tank, but he cannot see causation. Instead, the analyst's individual perception of causation results only from a complex process of inference, and as with other forms of inference, his specific perceptions are subject to systematic biases.<sup>74</sup> For most people the events in the world are seen as part of an orderly, causally related pattern, in which chance, accident

and error tend to be rejected as explanations for an observed event.<sup>75</sup> Moreover, the extent to which other people, ethnic or religious groups, or other nations pursue a coherent, rational, goal-maximizing policy is often overestimated.<sup>76</sup> The need to find order and not chaos or pure chance in the world is a powerful mental force; a bias that can lead to incorrect conclusions being drawn about causality.

The very real problem for the intelligence analyst is that, by definition, his task is to fit various intelligence reports into nice categories which can be explained. It is very hard to write an intelligence report on an observed event and conclude with an admission of ignorance as to the reasons for or implications of the event. Consequently, where the enemy is practicing some form of active deception, the analyst probably will find it much easier to accept and deal with the false data as true because he will find they fit better into an estimate that has good causal linkages. In the business of intelligence, if something is too good to be true, then it probably is not true; except, of course, when it is! The Germans were able to fit all of their evidence into one tidy package which pointed inexorably to a *Schwerpunkt* in the Pas-de-Calais sector.

*Probability.* This aspect of the cognitive bias affects the way the mind makes estimations of probabilities.

Social, political, military and economic development are not rigidly determined but occur or fail to occur with some degree of probability. Decision-makers cannot be certain of the outcome of their actions, so they weigh the probabilities of alternate outcomes. The information on which these decisions are based also involves many uncertainties expressed in probabilistic terms.<sup>77</sup>

Nevertheless, there is much 'fuzziness' in defining the terms 'probable' and 'possible'.<sup>78</sup> More important than the linguistic problem (which is dangerous enough) there is a systematic bias which affects the very accuracy of the way that probability is measured.<sup>79</sup> In general, analysts will tend to overestimate the probability of future event scenarios that are constructed from a series of discrete and individually probable events.<sup>80</sup>

The principle of representativeness dictates that the more detailed ... future scenarios become, the more likely they will seem – since the detail makes an account more strongly resemble the real world. But imagine a scenario involving seven such assumptions, each of which has a 90 per cent chance of being right. Its overall odds would be somewhat less than 50–50 ( $.9 \times .9 \times .9 \times .9 \times .9 \times .9 \times .9 \times .9 = 47.8$  per cent).<sup>81</sup>

Too many analysts and policy-makers never give a second thought to the fact that a multi-branch decision tree can produce a very low final overall probability factor.

If the bias in favor of giving so high a probability to a multiple sequence event is not bad enough, intelligence analysts often have even more difficulty in estimating the likelihood of low probability events even when they recognize that such events may have serious consequences.<sup>82</sup> In simplest terms, an analyst's estimate of an event's probability is directly influenced by its mental availability to him. If he can easily imagine or remember such an event, or something like it, then his probability estimate will be higher. Since many of the events that occur in war time are unique – and thus by definition low probability events – the likelihood of error because of this estimation bias looms large. For the German analysis, it was genuinely hard to imagine an Allied landing in the Normandy sector – with no ready access to a port and with the rocky shallows offshore – so it is not difficult to understand why they did not rate such a landing as a high probability event.

*Evaluation.* This cognitive bias affects the way the mind evaluates evidence in three different ways: the first is concerned with an over-sensitivity to *consistency*; the second with the *absence of evidence*; and the third with *discredited evidence*.

– *Consistency.* When preparing estimates, analysts routinely formulate alternate hypotheses and select the one which includes the greatest amount of the available evidence within a logically consistent scenario.<sup>83</sup> When very little information is available, serious problems of bias arise. Analysts tend to be over-sensitive to consistency. It is not uncommon for an analyst to have more confidence in the conclusions drawn from a very small body of very consistent information than from a larger body of less consistent data. Such confidence is misplaced because the conclusions drawn from very small samples are highly unreliable in a statistical sense.<sup>84</sup>

– *Absence of Evidence.* It is in the nature of military intelligence to have to assess situations in the recognized absence of evidence. In 1942 and 1943 the Germans were trying, with no objective evidence, to determine where the Allies would land in France before the Allies had decided. Most people in such situations have great difficulty in factoring the lack of evidence into their judgements.<sup>85</sup> There is a strong tendency mentally to sum all the variables in an equation to 100 per cent, and even the most experienced analyst finds it difficult to ascribe a high per cent factor to a single category called 'unknown information'.

or 'other unknown options'. Military officers, including those in intelligence, are constantly exhorted to 'expect the unexpected', but even when they do, they give it a very low probability factor.

- *Discredited Information*. Another critical bias phenomenon concerning the evaluation of evidence is that 'initial impressions tend to persist even after the evidence that created them is fully discredited'.<sup>94</sup> There is a natural 'tendency to interpret new information in the context of pre-existing impressions ... even after the new evidence authoritatively discredits the evidence on which it is based'.<sup>95</sup> Richard Heuer explains this: 'When evidence is first received, it is perceived within a context that implies [some] causal connection between the evidence and some antecedents that explain the evidence. The stronger the antecedents, the stronger the impression created by the evidence'.<sup>96</sup> Thus, even though early evidence is subsequently discredited, the original causal linkages remain plausible and may be seen by the analyst as sufficient to imply the existence of an event even in the absence of the discredited evidence.<sup>97</sup>

• *Perceptual*. The perceptual biases arise, as noted below in *Modeling, Plots and Narratives*, *Sagacity* and *Acumen*, from the nature of the process by which analysts perceive the world around them, and from the limits on the accuracy of perceptions.<sup>98</sup>

*Modeling (Bounded Rationality)*. The world is a very complex place, yet man copes with the complexity.

Over 20 years ago, Herbert Simon advanced the concept of 'bounded' or limited rationality. Because of the limits of our mental capacity, he argued, the human mind cannot cope directly with the complexities of the world. Rather we [all] construct in our mind a simplified model of reality and then work with this mental model. We behave rationally within the confines of our mental model, but this model is generally not very well adapted to the requirements of the real world.<sup>99</sup>

The mental models analysts construct as individuals are no more than 'simplifying strategies' which they employ to assist them personally when they mentally process information.<sup>100</sup> Since each of these models reflect individual needs - i.e., they are self-directed - they are dangerous models for use in viewing the world at large. The models an analyst must use when dealing with an adversary in a war-fighting context need to be sophisticated strategies, fine-tuned to the business of producing intelligence estimates. The German experience proved that even the personal models that are tailored to a professional military lifestyle are not well suited to estimating what an adversary will do.

*Plots and Narratives*. As an alternative to the use of simplifying models to deal with highly complex situations, Theodore Sarbin opines that human beings think, perceive and imagine according to a narrative structure. In other words, given two or three stimulus inputs, an analyst will connect them to form a story.<sup>101</sup>

The narrative is a way of organizing episodes, actions and accounts of actions; it is a mode of incorporating not only accounts of actions but also accounts of accounts of actions; it allows for the inclusion of antecedent and concurrent events which guide action. In short the narrative is an organizing principle ... Gestalt psychology has demonstrated that organizing principles are at work in the patterning or structuring of sense data. The gestalt idea ... is incorporated by the aphorism: the whole is greater than the sum of its parts.<sup>102</sup>

The narrative as a perceptual device is well suited as a tool to deal with explaining the behavior of others in military situations involving unbounded complexity. The narrative device has all the properties of a lively metaphor, and calls to mind the images of a story, a plot, characters and a storyteller.<sup>103</sup> When using the narrative as an intelligence estimation tool, the analyst becomes kin to the historian, who, 'unlike the novelist, is expected to tell his stories so that they [truly] are consistent with chronology and reveal a 'truth'.<sup>104</sup>

Of course, the key to a good novel is the plot. The same is true when the narrative is used as an analytical tool. The analyst focuses on the plot as a device for penetrating the meaning of the actions of others. He looks beyond the story - the narrative flow - and reads the intentions of the adversary in the underlying plot. The use of the 'employment technique' of analysis is not a substitute for prediction by other methodologies; instead it is a supplementary concept necessary for dealing with the complex or unique case, or with counter-deception analysis.<sup>105</sup>

While it is a powerful analytical tool, the concept of plots and narratives is not without its limitations. The plot, once constructed, will dictate the best possible endings for the incomplete story; once established, the plot becomes part of the analyst's current expectations.<sup>106</sup>

The problem for the counter-deception analyst is to construct a plot from antecedent events and predict the outcome. [He is] ... still concerned with predicting the actions of an adversary, but the foundations for [this] ... predictions are not chronologies of specific events, but the organizing principles that assign meaning to the happenings.<sup>107</sup>



Thus, if the analyst assumes that the adversary is practicing to deceive, and assumes that the enemy knows well the rules of the deception game, then the analyst's *a priori* question should be put immediately to the man who makes the policy – the man for whom the analyst is preparing the estimate.

The question for the policy-maker is simple: 'What makes YOU afraid?'<sup>100</sup> If the adversary is good at the deception game, then he will try to find out what makes the analyst's policy-makers nervous and play to that concern. Since the ultimate target of deception is the decision-maker, the adversary will use any means, fair or foul, to learn the fears of the enemy decision-maker or command apparatus. The analyst also must learn the same thing if he is to guard his policy-maker from the enemy's deception schemes. According to Brigadier Dudley Clarke: 'You can never by deception, persuade an enemy of anything not according with his expectations, which are not far removed from his hopes'.<sup>101</sup>

*Sagacity*, Sagacity relates to the ability to make keen discernments. It is a statistical approach to intelligence problem-solving.<sup>102</sup> Sagacity is simply a mental methodology which involves the making of predictions through the 'freezing' or 'holding' of a matrix of clues and inferences.<sup>103</sup> In using this statistical sort of approach, the analyst first establishes that particular pieces of information are part of a class of strategic actions and factors; he then predicts for the particular case from knowledge of the characteristic of the class – all of which assumes that the analyst first has inductively derived base rates available.<sup>104</sup> There are a number of intelligence judgements of this type which can be made with reasonable accuracy – but it is a 'bean counter' type of methodology.

The use of base rate statistical analysis is appropriate when occurrences are repetitive and when predictions are expected to be in error, proportional to the probabilities contained in the base rate.<sup>105</sup> In wartime situations with extremely high stakes, where life-and-death issues must be decided, inferences derived solely from base rates are seldom acceptable; the cost of false positives is too high.<sup>106</sup> Thus, the sagacity technique should be used only to supplement other forms of analysis. It could have been, but was not, used by the Germans to develop more reliable information about the Allied assault landing capabilities. Instead, in determining the enemy's amphibious assault capability by counting landing craft, the Germans appear to have altogether ignored the so-called landing craft base rate – or other background data on seafight capability. The German intelligence staff at OKH, *Fremde Heeres West*, was more concerned with the details of the Allied Order of Battle. Accordingly, as FHW identified new units and

added them to the OB charts, the Germans made the assumption that if a division was in England and was of the assault type, then, perforce, the landing craft for the units must also exist! The Allied deception planners knew of the 'bean counter' approach being taken by the OKH/FHW intelligence staff and gave them plenty of fictional divisions to count.

*Acumen*. Acumen means superior mental astuteness. It is contextual in nature and involves the analyst 'moving with the experimental flow, and responding flexibly to change and novelty as the target person enacts his roles'.<sup>107</sup> It is the technique that relies solely on the particular analyst's training and experience. He must be possessed of instinct, imagination, or *Fingerspitzengefühl*, and be able to listen with the 'third ear' and for the 'still small' voice.<sup>108</sup>

Acumen is the most powerful mental tool of the gifted analyst. Experience shows, one either has it or one does not – and an analyst may have it for one type of estimation or target area, and not for another. Acumen is like common sense – only it operates on a more intellectual plane. To paraphrase Theodore Sarbin:

Prediction by acumen is the stock in trade of the analyst who can penetrate the masks and expose the lies of the adversary. He does this not exclusively by verbal or nonverbal tip-offs or leakage but through empathetic skills. Everyday experience confirms that some analysts have skill in taking the role of the other. What appears to be involved when one analyst consistently makes the correct predictions of the conduct of other? Various traits have been posited, such as *Einfühlung* i.e., an empathetic understanding, or a getting in the spirit of the thing, social intelligence, and so on. Such traits serve only as synonyms for acumen. Among other things, it seems that the ability to view the world from the perspective of another is related to the analyst's ability to a 'decenter', i.e., to shift from an established mental anchor to a new position in perceptual and cognitive judgments. It may be inferred that the analyst who is successful in taking the role of another is able to construct a scenario, a story, and place himself in relation to the other features of the story, physical features such as geography and climate, and social features, such as role relationships with multiple role players.<sup>109</sup>

Sarbin asks and answers the pertinent question: 'Can acumen be learned? The literature of psychology contains a number of programs that in principle might serve as heuristic devices for the training of analysts of strategic interaction'.<sup>110</sup> But, more importantly, common

experience teaches that those predisposed to reason well will work in areas requiring that talent – law, scholarly research, writing, etc. The Second World War experience of the British certainly seems to bear this out, whereas the military academies, whether Prussian pre-war or otherwise, do not produce this type of gifted individual in any significant number.

### 3. *The Current Expectations Factor*

The Germans clearly recognized that their estimates were probably anticipating the actual Allied decision-making process. To overcome that problem, the German analysts attempted to develop logically the plan of attack that they believed their adversaries in time might also develop. After cataloguing and analysing the advantages and disadvantages of many areas the Germans decided that the best coastal sector for invasion was in the Pas-de-Calais region of France – on which, interestingly enough, all the Allied plans up to mid-1943 had focused.<sup>111</sup>

The Germans began to prepare their defenses accordingly. At that point the *current expectations factor* began to interfere with the German perception capability. Having concluded that the enemy would land in the Pas-de-Calais, the Germans naturally tended to ignore or misinterpret indicators pointing to large-scale landings in other sectors. Inasmuch as the current expectations seemed logically sound – and they were the product of careful study – they carried with them their own self-proving persuasiveness.

Many experiments demonstrate the extraordinary extent to which the information obtained by an analyst depends on his preconceptions, expectations and even his assumptions.<sup>112</sup> An analyst's expectations have many diverse sources, including past experience, professional training and cultural and organizational norms; all of which predispose the analyst to pay particular attention to certain kinds of information and to organize and interpret this information in certain ways.<sup>113</sup>

Thus, the current expectations factor is a fundamental principle of perception: analysis tends to perceive what they expect to perceive. A corollary is that it takes more information, and more unambiguous information, to recognize an unexpected phenomenon than an expected one.<sup>114</sup> If an analyst is not expecting immediate trouble, or trouble of a particular kind, or trouble in a particular place, then his neutral expectations determine how he will read an intelligence report; even as he sorts the reports before him, an analyst will select what accords with his expectations.<sup>115</sup> Such patterns of expectation, rooted in past experience and training, subconsciously tell the analyst what to look

for, what is important, and how to interpret what he sees; these patterns form a 'mind-set' that predisposes the analyst to think in certain ways.<sup>116</sup>

In dealing with a major target country, intelligence officers naturally approach their task with a set of expectations about the target's likely patterns of behavior.<sup>117</sup> It is practically impossible for an analyst to sift the relevant from the irrelevant and to perceive a pattern in a large volume of information unless he has some hypothesis to guide him, for it is the analyst's expectations, resting on his beliefs about what is likely to happen, that determine what information receives his attention.<sup>118</sup> Richard Heuer notes that 'mind-sets are neither good nor bad: they [simply] are unavoidable. There is no conceivable way of coping with the volume of stimuli that impinge upon our senses, or with the [total] volume and complexity of the information that we have to analyze without some kind of simplifying preconception about what to expect, what is important, and what is related to what'.<sup>119</sup> And analysts must recognize that objective analysis is not achieved by avoiding preconceptions but by recognizing the tentative nature of all knowledge and by devising means to test our perceptions and assumptions against reality.<sup>120</sup> Joseph Stalin is said to have warned his intelligence chiefs to keep away from 'hypothesis and equation with too many unknowns', saying that 'an intelligence hypothesis may become your hobby horse on which you will ride straight into a self-made trap'.<sup>121</sup>

Against this background of current expectation problems, Richard Heuer observes: 'As a general rule, we are more often on the side of being too wedded to our established views and thus too quick to reject information that does not fit these views, than on the side of being too quick to reverse our beliefs. Thus, most of us would do well to be more open to evidence and ideas that are at variance with our preconceptions'.<sup>122</sup> The problem with this advice, as noted by Michael Handel, is that 'open-ended ideas do not provide enough basis for action or longer planning, as continuous change [and conflicting information] can bring about confusion and paralysis'.<sup>123</sup>

Almost without exception 'human beings impose structures on the flow of experience'.<sup>124</sup> Scientists and engineers tend to impose more formal structures, and in doing so 'schematize the flow of experience, seeking structure and organization as abstracted schemata aided by mathematical, geometric, graphic ... or other models'.<sup>125</sup> They inevitably produce a regressive view of the world which over the long span of time accounts for the observation that 'the extremes move toward the average'.<sup>126</sup> Given a choice, this tendency suggests that artists and writers are better suited or mentally disposed, to be intelligence analysts.

While the current expectations of the analyst are important, so are

those of the adversary. 'Intelligence prediction is the estimation of the likely actions or intentions of foreign nations, and its failure can be reduced ... to a misunderstanding of foreigners' conceptual frameworks - i.e., a failure to understand properly the assumptions or interpretations of the situation upon which the foreigners base their decisions.'<sup>127</sup> When the adversary's actions do not correspond with the analyst's current expectations, behavioral surprise results. Thus, when an analyst forms expectations about the enemy he must be sure that they correspond with the adversary's attitudes or predispositions, for both affect the behavior of the adversary government.<sup>128</sup> Attitudes, though powerful in shaping behavior, do not by themselves determine it: behavior depends upon the information on which the adversary in question acts and the value he places on the outcome of alternative courses of action; it is through a mediation of such calculations that attitudes are brought into play.<sup>129</sup> Accordingly, intelligence estimates are often wrong, not simply because the analyst does not know the information or basic values on which an adversary acts, but because he assumed the adversary would 'act on the basis of approximately the same information or values that the analyst possesses'.<sup>130</sup>

Intelligence analysts share information and ideas, formally in reports, or casually in conversation. Studies of group interaction show that an analyst's interpretation of a piece of intelligence information will influence those with whom he is in contact.<sup>131</sup> In a military environment, the rank of the intelligence officer will influence the weight given to information from him.<sup>132</sup>

Three concepts - *unconscious suppression*, *stubborn attachment*, and *psychological investment* - form a cornerstone theory that explains why the current expectations factor tends to cause intelligence analysts and commanders to become locked into certain mind-sets.

- *Unconscious Suppression*. When an analyst is processing new intelligence information he approaches it with 'a set of assumptions and expectations about the motivation of people and the process of government in foreign countries: events consistent with these current expectations are perceived and processed easily; those that contradict prevailing expectations tend to be ignored or distorted in perception'.<sup>133</sup> Accordingly, from time to time, all of the old information should be re-examined - for an analyst's current expectations may change - to see if anything was overlooked, albeit unknowingly.

- *Stubborn Attachment*. Sometimes the analysts' problem is one of not being able mentally to discard an expectation. 'Human beings have a stubborn attachment to old beliefs'.<sup>134</sup> In some instances the pattern of expectation are so deeply embedded that they continue to influence

preconceptions even when the analyst is alerted to and tries to take account of the existence of data that does not fit his preconceptions; trying to be objective does not guarantee accurate perception.<sup>135</sup> This problem is often referred to as *mental anchoring*.<sup>136</sup>

- *Psychological Investment*. At some point in the normal development of every intelligence estimate, the analyst moves from having a tentative hypothesis to having a reasoned opinion, and, at that point, he subconsciously makes a psychological investment in his work product. The harder he has worked to get to that point, the bigger his psychological investment. As his work continues, the analyst will find the intelligence information he used first will support his initial theory more and more; he will also find more facts to support his view. Once his estimate is put down on paper - especially if it is disseminated - the analyst's psychological investment in the product will make a change of mind virtually impossible.<sup>137</sup>

#### 4. The Options Factor

In their attempt to cast themselves mentally as planners in the role of their adversary, the Germans had to make certain basic assumptions about the expected Allied amphibious operations. Lacking reliable information about the enemy's developing doctrine, techniques and capabilities, the Germans assumed that their enemy would solve the problems in the same way that the Germans would. However, their only real experience in such matters was the invasion planning associated with Operation Seelöwe, the 1940 German plan to attack England.

Before the Allied raid at Dieppe in August 1942 there was considerable similarity in German and Allied amphibious assault theories.<sup>138</sup> The Dieppe raid and the invasion of French North Africa in November 1942 highlighted a number of serious problems, and the 1943 landing in Sicily and the landings on the Italian mainland allowed the Overlord planners to refine their amphibious doctrine.<sup>139</sup> The German understanding of the cross-Channel invasion difficulty remained primitive.

Computing the Allied seafight capability on the basis of their Seelöwe estimates, OKM overestimated it by 20 divisions. The Germans assumed that the Allied plan, like Seelöwe before it, would involve one or more large diversions in conjunction with or prior to the *Schwerpunkt*; that their enemy would land at dawn and at high tide in order to unload his vessels as close to the high water mark as possible; that the landings would be made when the seas of the English Channel were quiet, after the heavy caliber coastal guns were destroyed, and at a time of blue sky weather to allow for the most effective use of the Allied air

forces. Finally they assumed that the initial object of the assault forces would be the capture of a port or ports. In addition, almost all of the assumptions made concerning Allied invasion logistics proved wrong which also contributed to the errors in the Germans' pre- and post-invasion estimates.

The Germans imputed a universality of options based on what they knew or thought they could do, or upon facts they assumed were true. The real danger in option projection is the likelihood that the analyst's catalogue of possible options is too limited. The Allies had far more options and capabilities than the Germans imagined.

For an analyst to be able to estimate what an adversary may do, his intelligence data base needs to mirror not only the information theoretically available to the enemy commander, but must also include the information actually known or believed by the enemy planner. 'What is or is not possible matters less than what the enemy's believes is possible.'<sup>140</sup> A determination of the enemy's capabilities must, of course, be based on real world data, but since intent is formed on the basis of a belief about capabilities – which may be wrong – the analyst needs a different kind of intelligence.

If an analyst is to formulate reliable current expectations about the enemy he must understand the enemy's total array of options, even those which appear to be beyond his known capabilities. Building a multi-option array is a useful exercise in imagination and helps to curb the tendency to make a hasty judgement both about the options the enemy believes he has, and about his actual intent. To have too narrow a list of enemy options, or to misunderstand them – the twin failings of German analysis – puts the analyst in a dangerous position.

• *Developing the Hypotheses.* The first step in developing the hypotheses is 'option building': the formulation of the widest range of options on the basis of the enemy's actual capabilities, and then adding all the options that would be possible if the facts were as the enemy believes them. This simple cataloging process will make these options 'available' in terms of recall if information is received later that bears on the original option hypotheses.

*Availability.* The real problem for the analyst involved in the development of a broad array options list – assuming that he does not have the convenient aid of MAGIC intercepts – is that it is very hard to imagine the unimaginable; to go beyond the readily apparent options to find new, clever or unexpected ones. The problem here, of course, is the availability bias. 'People judge the likelihood of something happening by how easily they can call other examples of the same thing to mind.'<sup>141</sup> Obviously then, if an analyst has little or no experience in

operations, or his knowledge of tactical doctrine is out of date, he will produce a very short list of options.

All too often, the analyst considers only what his side would do and assumes that the other side would do likewise, as if military options had some sort of universality. To be sure, at the primary level of attack, defend, reinforce, counterattack or withdraw – which is a fine list for low-level tactical analysis – options do have a universality; at the strategic estimates level more imagination is required.

*Consistency.* A factor which impedes the formulation of good sets of possible options is the frequent assumption by analysts that enemies will always act as they have in the past. If analysts believe that their side learns from its mistakes and that real improvements come from experience, they should assume that the adversary also improves within the limits of its capabilities.

The consistency factor is made worse because analysts also tend to assume that the enemy will act in a certain way within the bounds of his presumed capabilities or limitations. Time after time the Germans tended to grossly overestimate or underestimate their enemy's capabilities. It is important for the analyst to know about the enemy's past actions, otherwise he may know too little about his total range of options. However, if he is to make consistency judgements, the analyst needs a more representative sample of what the enemy has done in the past.<sup>142</sup>

*Alternative Hypotheses.* Analysts tend to perform rather poorly at the task of formulating full sets of enemy options; they simply do not – or cannot – postulate a broad enough set of alternative hypotheses. The formulation of proper alternative hypotheses and the identification of the key indicators associated with each help direct an economical search for information. The hypotheses also serve as an organizational structure for the easy storage and recall of information in memory.<sup>143</sup> In this way, a wide variety of options can be examined over time as the evidence becomes available. It is never wise to discard an option too early in the search for information – the option you discard may be so secret that you have yet to get anything on it, or it may prove to be the solution to a problem that the enemy has yet to discover.

How fanciful a list of options should the analyst assemble? The Germans were sure that the key to the invasion strategy was the quick capture of a port. The Allies, believing the quick capture of a port would be impossible, brought their ports with them in artificial form. Accordingly, the wise analyst should remember these words from *Through the Looking Glass*:

'I daresay you haven't had much practice,' said the Queen (to

Alice]. When I was your age, I always did it for half-an-hour a day. Why, sometimes I've believed as many as six impossible things before breakfast.<sup>144</sup>

How much easier it is to imagine only improbable things!

How does an analyst learn to do that? Some people certainly seem able to achieve an excited mental state that leads to insights which go well beyond the ordinary. Consider what the ramifications could have been if a German analyst had thought of the improbable option of the Allies bringing their ports with them; then tying their idea to the information the Germans actually had about the existence of the devices.<sup>145</sup> Had Rommel known the enemy had a method of avoiding the need to capture a port, he might have focused on the real danger to the Normandy sector.<sup>146</sup> What if Hitler himself – who imagined some pretty fanciful things – conceived that such an option existed?<sup>147</sup> The Führer was concerned about the Normandy sector, but failed to realize the seriousness of the threat because he linked the landing sites with the need to get to a nearby port: he was but a single option away from the truth!

In developing broad option lists, well stocked with alternative hypotheses, the analyst is probing the question of whether the enemy will actually end up doing the improbable. Doing the improbable is the very essence of effecting surprise. Therefore, a systematic worst-case analysis is necessary if a defender wants to guard against the happening of a low probability event.<sup>148</sup> The problem with the worst-case analysis, as the Germans found out, is that the defender may not have enough resources to be everywhere strong.

In thinking about the improbable, the analyst must remember that surprise results when the enemy is more imaginative than the analyst within the limits of his perceived capabilities. Progress in terms of the art of war is nothing more than the story of problems and solutions. The German *Blitzkrieg* was designed to avoid the stalemate of intractable trench warfare.

This brings up the issue of whether the list of options possibly open to the enemy should include only those which appear rational to the analyst. Certainly not. History is too full of examples of actions which at first appeared irrational, but on closer examination were quite logical to the actor. 'The behavior of people with a cultural difference from one's own often *appears* irrational when in fact they act rationally but evaluate the outcome of alternative courses of action in terms of value that differ sharply from others.'<sup>149</sup>

Helmut von Moltke (the elder) cautioned: 'If there are four options open to the enemy, he is likely to choose the fifth'.<sup>150</sup> In other words, an

analyst must never close his mind to the possibility that the enemy may have a greater than expected capability, or do something based on a mistaken appreciation of his capability of the situation, or simply analyse the situation from a different perspective. The deliberate conscious exploring of alternative hypotheses in regard to the enemy's options is a way for the analyst to examine these possibilities in a systematic way.

• *Testing the Hypotheses.* After the analyst has developed a broad spectrum of alternative hypotheses they are tested in an analysis process involving several critical aspects.

It is generally assumed that the only satisfactory basis for intelligence prediction is by the objective standard of estimating the actions of other states rationally in terms of their assumptions.<sup>151</sup> As often as not intelligence mistakes result from 'holding to an incorrect conception of how the [analyst's] opponent sees the situation'.<sup>152</sup> The analyst always must be ready to accept the view that the adversary is 'in the grip of a serious misconception'.<sup>153</sup> The analyst must be particularly sensitive to the adversary's view of risk-taking or his willingness to fight against what often may appear as seemingly overwhelming odds. The analyst must also be well versed in the enemy's tactical doctrine.

Still, the analyst must recognize that the art of war is not a new profession. Certain principles of war have proved to work best in certain situations. Accordingly, analysts must continually ask themselves: 'What are the most obvious and reasonable directions from which an adversary might attack, even if the available evidence contradicts such contingencies?'<sup>154</sup> Most often the obvious attack will come – at least at the tactical level – for often the defender is powerless to prevent it and sometimes the attacker does not have the time or capability to do anything else.

Thus, once the obvious attack – the school solution – is considered as an option, it can be examined to see if there are reasons which, though not apparent at first, will prompt the adversary to do something else. For example, there were many reasons why the Pas-de-Calais sector was the obvious first choice of a place to attack. But, upon careful examination, the Allied planners found that it was not the best place. The Germans never managed to get beyond the apparent school solution.

The concept of analysis through the enemy's viewpoint was not unknown to the Germans. *Oberst* Reinhard Gehlen, head of OKH *Fremde Heere Ost*, said that 'for many years my colleagues and I had trained ourselves to see through the enemy's eyes – to think as he would think and calculate his intentions'.<sup>155</sup> Still, the verdict of history is clear:

the German analysts failed miserably when they tried to apply the practice at a strategic level.<sup>156</sup>

*Attribution.* Analysts tend to attribute the behavior of others to the nature of the person and the behavior of their side to the nature of the situation.<sup>157</sup> This tendency leads to serious errors in analysis. 'Personal traits are not consistent determinants of behavior, which traits predominate at any given time is heavily dependent upon the situational context in which the behavior takes place.'<sup>158</sup>

Another attribution-type problem also bears mention. 'Attribution of behavior to national characteristics and the assumption that these characteristics are consistent over time leads to the perception of behavior as inflexible and unchanging. Conversely, to the extent that behavior is attributed to external circumstances, it is perceived as flexible and subject to influence by the actions of the adversary.'<sup>159</sup>

*Risky Options.* Michael Handel has noted the following paradox: 'The greater the risk, the less likely it seems, the less risky it actually becomes. Thus, the greater the risk, the smaller it becomes.'<sup>160</sup> In war, everything is risky, but some options are decidedly more risky than others. The decision of General Eisenhower to proceed with the D-Day landings in the light of the adverse weather conditions was a high-risk decision, but from the German perspective the weather made an attempt seem unlikely, so the Allied risk was lessened by the fact that the Germans were not on the alert – even though some signs suggested they should be. In order for the analyst to judge the degree of risk involved in any particular option he must first understand the concept of risk-taking.

In the 1960s Daniel Kahnemann and Amos Tversky determined that 'people tend to avoid risk when seeking gains, but choose risks to avoid sure losses'.<sup>161</sup> When analysing an adversary's risk-taking vs. risk aversion temperament, the analyst can assume that if the enemy is on the defensive and is being pushed back (the fight or flight situation) then he is likely to take greater risks to put the situation right – as Hitler tried to do at Stalingrad. However, as a guide to estimating the risk level acceptable to an adversary that is expected to attack, the theory is less reliable. To paraphrase Michael Handel:

Assuming rational behavior on the opponent's part, the analyst may predict that a very risky operation, entailing very high costs and uncertain benefits, probably will not be implemented. Conversely, he also may assume that an operation involving low risks and high benefits will be selected.

Although valid in theory, such assumptions are very unreliable

in practice. In the first place, a high risk in one culture may be acceptable in another. Second, what sometimes appears to be a great risk for an adversary may actually be less hazardous as a result of developments unknown to the analyst. Third, the analyst may underestimate the readiness of the enemy to take risks assuming that the adversaries know as much as they do about the strength of the analyst's side as he does. Fourth, the assessment of a specific risk is complicated by the estimated impact of strategic surprise (will strategic surprise – as a force multiplier – redress an imbalance in forces). Finally, in many instances, the stronger defender, interested in perpetuating a favorable status quo, will not comprehend the potential attackers' desperate frame of mind.<sup>162</sup>

Thus, the attacker may choose what is, or appears to be, a high-risk attack option. And sometimes he may win doing so, although 'no rational connection exists between the degree of risk on the one hand and the choice of strategy on the other. The temptation to choose a high-risk/high-gain strategy always is present'.<sup>163</sup>

One of the problems in deciding whether a particular option is risky arises in assigning a probability to its success. Analysts naturally tend to have trouble dealing rationally with probability concepts. The old military planning rule, 'KISS' ('Keep it simple, stupid'), takes probability theory into account. So does the rule which states: 'The more things that can go wrong, the more things will go wrong'. Since these kinds of rules for planning operations are well understood, they ought to be applied when analysing enemy options. If an apparent option has too many chance events involved in it, then it may not be a real option, that is, one that a competent planner would choose if he has a better alternative. If the analyst simply keeps in mind 'that the likelihood of any two uncertain events happening [successfully] together is always less than the odds of either happening alone (it is easier to flip heads on one coin toss than to flip heads twice in a row)' then his chances of estimating the probability of risk associated with any given option will improve. By way of contrast, it appears that the Germans were perfectly content to accept the idea – their own preconception reinforced by the Fortitude deception – that the Allies would mount several large-scale diversions in France followed by the *Schwerpunkt* in the Pas-de-Calais, with a six-division sideshow thrown in for good measure in Norway!

• *The Unique Case.* History is full of random events; no vectoring of progress can be discerned in it.<sup>164</sup> Thus, why should the analyst suppose that an adversary's choice of options in time of war will be more

ordered – for after all, is not the object of war controlled chaos? The problem becomes one of discovering which of a wide variety of options the enemy will actually choose in a particular situation. There are situations where the magnitude of the cost of failure is catastrophic and the benefit of success is stupendous (historic turning points); such events have unique properties so they become unique cases.<sup>165</sup> The D-Day invasion of Normandy certainly fits that definition. The Germans understood that an invasion was coming. They appreciated that, if the invasion was mounted successfully by the Allies, then the war would be lost.<sup>166</sup> It was not by inattention to the problem that they failed to estimate what was afoot. They simply failed to deal with the problem as a unique event and not a sand-table exercise with routine options.

### 5. *The Plausible Interpretations Factor*

The Germans had overestimated the size of the Allied force available in England for a cross-Channel deployment. They also overestimated the Allied sea-lift capability. To make matters worse, they assumed that the enemy would stage several diversions – some of division-plus strength – in addition to launching the *Schwerpunkt* in the Pas-de-Calais sector. Accordingly, the German analysts easily could, and did, accept reports of attacks at many far separated points as indicative of the diversionary targets.

It is not uncommon in intelligence work to have many bits and pieces of information which are subject to several equally plausible interpretations and may support several different theories. Not even all true intelligence information necessarily is mutually exclusive. The *plausible interpretations factor* facilitated increased confusion in the development of the German estimates.

In late 1943 and during early 1944 there were often several plausible alternative explanations of the significance of the intelligence information collected by the Germans, and it is not surprising that the German analysts were inclined to select the explanation that fitted the OKW expectation that the Allies would land in Pas-de-Calais. Moreover, at the same time the ambiguous information was coming in, the Germans had plenty of apparently good information pointing unequivocally to the Pas-de-Calais sector.

Although the phenomenon has been observed elsewhere, nothing satisfactory has been written to explain the phenomenon called 'unconscious finagling'.<sup>167</sup> This relates to intelligence information that is ambiguous, or apparently ambiguous, not to explicit data. In intelligence analysis there is a powerful tendency to make something out of all the information collected. Sometimes the analyst may conclude that some of the data is irrelevant or false and discard it. Or he

may conclude that certain new information has value, in which case he is obliged to resolve the ambiguity. Common experience supports the view that analysts tend not to wait for further data that might clarify the issue but to resolve the ambiguity within the context of the existing data. There is a strong bias toward accepting the plausible interpretation which best fits the analyst's current expectations.

The longer an analyst is exposed to ambiguous data, the greater confidence he will develop in any initial – and perhaps erroneous – impressions he forms.<sup>168</sup> As that confidence increases, the resolution of the ambiguity – which the analyst increasingly will believe was only apparent – will become clearer, until he will finally conclude that there is no real contradiction between his expectation and the new information.<sup>169</sup> The ambiguity is subconsciously resolved so that it is perceived as a difference without a distinction. When this happens, 'the initial misinterpretation is maintained until the contradiction becomes so obvious that it [finally] forces itself upon our consciousness'.<sup>170</sup> But the problem does not end there:

The early but incorrect impression tends to persist because the amount of information necessary to invalidate the [initial] perception is considerably greater than the amount required to form an initial impression. The problem is not that there is any inherent difficulty in grasping new perceptions or new ideas, but that the established perceptions are so difficult to lose. Thus, inaccurate perceptions generated by ambiguous data may persist even after additional information has been received to clarify the initial ambiguity.<sup>171</sup>

Richard Heuer suggests that 'one might seek to limit the adverse impact of this tendency by suspending judgment for as long as possible as new material is being received'.<sup>172</sup> The advice makes sense, but, practically, many analysts find it hard to do.

The tendency both to resolve ambiguity where possible, and to resolve it within the context of the analyst's current expectations can be explained in terms of a number of recognized *operative biases*. The following are but a few that play a role in the way analysts resolve the ambiguity of information that has several plausible interpretations.

- *Unconscious Suppression*. Since their current expectations determine what they are likely to see, analysts tend unconsciously to suppress any data that point away from the expected point of attack.<sup>173</sup> So strong is that bias that, if pressed to resolve what looks to be information strongly suggesting danger elsewhere, an analyst will often rationalize the ambiguous data as part of an enemy deception.



• *Stubborn Attachment.* Two of the most important characteristics of perception are that it is quick to form but resistant to change.<sup>174</sup> When the analyst has a current expectation based on some perceived likely enemy option, he will resolve new information, if ambiguous, in a fashion that will allow it to meld with his expectation. The process is like pouring water into a cup. There is no similarity between the cup (the expectation) and the water (the new data), but in the process of pouring the water takes the shape of the inside of the cup. By unconsciously dealing with information in this plastic sense the analyst can both use the new information and retain his expectation.

• *Assimilation.* In this corollary to stubborn attachment, the analyst becomes so desirous of using the new information that he simply incorporates it into the existing expectation, even if this produces some slight change in the original expectation. The analyst both changes the expectation, and denies that it is changed. This particularly deceptive bias explains why gradual change often goes unnoticed.<sup>175</sup> Richard Heuer notes that the 'tendency to assimilate new information to pre-existing images is greater "the more ambiguous the information, the more confident the actor is in the validity of his image, and the greater his commitment to the established view"'.<sup>176</sup>

• *Consistency.* Another factor that prompts the analyst to resolve ambiguity in favor of the current expectation is the need to maintain consistency. If the ambiguous information is accepted as true, then it will either fit the current expectation or not. Because of the confidence the analyst already has in the current expectation, doubts will be resolved subconsciously in favor of accepting the new data as consistent with the existing expectation.

• *Rationality.* When an analyst initially forms his current expectations about the adversary he tends to use a rational process. Similarly, the analyst tends to resolve ambiguity in data in favor of the position which affords a greater sense of rationality. However, most analysts tend to overestimate the rationality of the decision-making process or apparatus they are analysing.<sup>177</sup> As Admiral Frank Fletcher reminds us: 'After the battle is over, people talk a lot about how the decisions were methodically reached, but actually there's a hell of a lot of groping around'.<sup>178</sup> For the analyst the problem also may be the reverse: what first appears irrational may be the result of a decision process which the analyst does not understand or had not anticipated.

• *Causal Illusion.* Because of our common tendency to impose order on our environment, we will often seek and see patterns that actually are not there.<sup>179</sup> In this regard the analyst may view apparently

ambiguous evidence as either a causal precedent to or a causal result of his current expectation, ultimately seeing a relationship and connection that does not exist.

• *The Leading Question.* Sometimes an ambiguity is plausibly explained in terms of the current expectation because of the way the information came to the analyst. There are times when others may pass on information with a note saying that it may be important in regard to the current expectation. The implied question suggests the answer. The analyst may also get data in the form of a report he is asked to review for his superior officer who thinks that there is a 'fit' and wants a second opinion. There are several ways that information can be forwarded which may suggest a connection that the analyst might otherwise have missed. An analyst may give a different answer to the same question, when it is posed in a slightly different way.<sup>180</sup>

It is impossible to tell which one or more of these operative biases led the Germans to accept that the Allies had the capability to strike virtually anywhere in the West. But we know that they did; for that reason due regard must be paid to the *plausible interpretations factor*.

There is a useful heuristic – the fourteenth-century investigative principle known as 'Occam's Razor' – that will aid the analyst in resolving ambiguity while avoiding the snare of current expectations. William of Occam, born c. 1346 and a teacher at Oxford, is still remembered for his pragmatic approach to problem-solving. He believed in shaving away (thus the razor) all extraneous details related to the problem. Further, he postulated, where there are several apparent solutions to a problem, the correct one probably is the most obvious. Thus, the analyst who would follow the master's teachings will avoid unnecessarily multiplying hypotheses, or creating ones which are too complicated.

Some analysts do not find Occam's method an altogether satisfying form of analysis. It is a methodology that is neutral to consistency, causality and rationality, but works by cutting through to the very essence of the problem. It may lead to a conclusion that a chance or random event has occurred, which many will not like because 'people generally do not accept the notion of chance or randomness' – at least not in their lives.<sup>181</sup> Yet there are times when the intelligence information available to an analyst can, and should, be explained in no other way.

Some of the greatest confusion on the morning of D-Day was caused not by the parachute dummies dropped behind the enemy's coastline as part of the tactical deception plan, but by real live paratroopers accidentally dropped far from their designated drop zones. Local



German units reacted strongly to the reports of these parachutists as if they were part of much larger forces. Their accidental presence in the enemy's rear made it very difficult for the *Wehrmacht* units in the battle area to get a clear appreciation of what was actually happening. And yet, their presence was not part of any plan but the result of random chance in the form of transport pilot navigational error.

#### 6. *The Distraction Factor*

One of the major problems associated with the implementation of elaborate cover and deception plans is the possibility that, under the close scrutiny of the enemy, one or more of the plans may be discovered to be a hoax. Working in the Allied planners' favor in 1944 was the *distraction factor: noise, work, fear, hope, self-righteousness and alert fatigue*.

- *The Distraction of Noise*. The concept of 'noise' was first used in the context of intelligence analysis in 1962:

First of all, it is much easier *after* the event to sort out the relevant from the irrelevant signals. After the event, of course, a signal is always crystal clear; we can see what disaster it was signaling, since the disaster has occurred. But before the event it is obscure and pregnant with [many] conflicting meanings. It comes to the observer embedded in an atmosphere of 'noise', i.e., in the company of all sorts of information that is useless and irrelevant for predicting the particular disaster.<sup>162</sup>

'In terms of ... intelligence perception, noise is the buzz set up by competing information signals which prevents the essential message from being heard loud and clear.'<sup>163</sup>

Intelligence information is often divided into two types: correct and incorrect, or in intelligence jargon, signals and noise.<sup>164</sup> It may be more helpful to think of intelligence information as being of four types: true and false, relevant and irrelevant,<sup>165</sup> all of which, in the sense of distraction, amounts to signals, noise, noise and more damn noise! The false indicators (relevant and irrelevant) tend to get just as embedded in the piles of true but irrelevant materials as the correct, real or actual indicators the analyst is seeking. Accordingly, in some instances, the noise generated by an abundance of high-quality but incompatible or irrelevant intelligence presents a formidable distraction – particularly where there is little evidence pointing to the real target, and a lot pointing elsewhere.<sup>165</sup>

The analyst must always remember that the false indicators always are more likely to be noticed than the actual ones, if the enemy is

planting deceptive clues that correspond to the analyst's preconceived notion. Thomas Schelling has aptly noted that 'unlike movies, real life provides no musical background to tip us off to the climax'.<sup>166</sup>

Michael Handel has noted several paradoxes relating to the distraction of noise. First, 'as a result of the great difficulty in differentiating between "signal" and "noise" in strategic warning, both valid and invalid information must be treated on a similar basis. In effect, all that exists is noise, not signals'. Second, there are 'the sounds of silence. A quiet international environment can act as background noise which, by conditioning observers to a peaceful routine, actually covers preparations for war [or attack]'. Third, 'the more information [that] is collected, the more difficult it becomes to filter, organize and process it in time to be of relevant use ...'; thus volume becomes noise.<sup>167</sup>

- *The Distraction of Work*. The commanders in France and Germany were subjected to the ever-present distraction of the normal daily functions in their sectors of command responsibility. For many of them, and *Generalfeldmarschall* Rommel in particular, time spent preparing for the expected invasion could not be spent in undistracted intelligence analysis. At the moment of the invasion, Rommel was in Germany preparing to see Hitler to argue the case once more for releasing the *Panzer* reserves to him so that he could position them well forward along the coastal front.

- *The Distraction of Fear*. The actual indicators – those pointing to a *Schwerpunkt* in Normandy – muted by the 'noise' of the false and the irrelevant indicators, competed for attention in the minds of Germans being subjected to the immediate distraction of fear arising from real concerns about the dangers of landings elsewhere in France, especially in the Pas-de-Calais. Anxieties about the course of events on the Russian and Italian fronts also influenced the thinking of some of the men responsible for preparing and acting on the estimates concerning invasion dangers along the coast of northern France.<sup>168</sup> This is not the sort of fear – the Cassandra syndrome – that paralyzes men into inaction, but a real one that causes them to turn their mind from the problem.<sup>169</sup>

By the spring of 1944 the Germans were over-extended on every front. Reaction to the apparent threats on every quarter had thinned the defensive line in France to the point where it was comparatively strong only in the Pas-de-Calais sector. The other sectors could deal with large raids and division-sized diversions, but none could deal effectively with a large diversion or with the main landing. The over-commitment of forces and resultant weak defensive capability led to a very distractive type of fear. If the Germans accepted any new theory

that predicted a large diversion or the *Schwerpunkt* outside the Pas-de-Calais sector, then the danger area would have to be strongly reinforced. With no strategic reserves available, any such reinforcement could come only at the expense of weakening another sector.

General Warlimont said that the OKW knew that the success of the enemy's invasion would be decisive for the outcome of the war, but neither Hitler or the OKW could bring themselves to make planned economies on the other fronts – in fact, on four occasions in 1944 before 6 June, units were moved out of the French coastal sectors. Pleas for reinforcements generally went unheeded.<sup>190</sup>

Most men have a natural, especially stubborn resistance to accepting and dealing rationally with unwelcome information.<sup>191</sup> Hitler and the other German analysts proved no exceptions to this rule; consequently, no unpleasant conclusions were accepted. The Germans initially opted to guard against every possible threat and, having reached the limits of their capability, opted to accept as real only those threats they believed they could defend with the existing deployments. Fearing the unpleasant conclusion, they simply ignored it.<sup>192</sup>

• *The Distraction of Hope.* Also working against the Germans in 1944 was the distraction of hope, sometimes called the Pollyanna Syndrome.<sup>193</sup> The Germans, especially Hitler and the OKW Officers, hoped that if the Anglo-Americans attacked in the Pas-de-Calais sector, where the Germans were the strongest, the invasion force could be destroyed or at least severely crippled and contained. Then a number of strong German divisions would become available for service on the Russian Front.<sup>194</sup> The Germans believed that the transfer of some 50 divisions to the Eastern Front could lead to the destruction of the Russian armies, or a bid for a separate peace from the Russians. That belief – and the hope it held for the salvation of Germany – made it difficult for the Germans, and Hitler in particular, to give credence to any estimate or report that did not predict the main assault would come somewhere in the Pas-de-Calais sector.<sup>195</sup>

The problem inherent in this type of thinking is that it focuses – according to the defender's view – on what would be most convenient for the enemy to do, and distracts from a proper analysis of what is capable of doing and a determination of his best option if he seeks the most promising course of action in a given situation.<sup>196</sup>

• *The Distraction of Self-righteousness.* If an intelligence analyst is to perform at his best, he must be a dispassionate adviser and absolutely objective. However, in the heat of the action this is virtually impossible. In such situations, or those where there are moral or ideological overtones, the distraction of self-righteousness comes into

play. Once an analyst becomes convinced that his side deserves to win – or simply must win – true objectivity is lost, and the analyst's perceptive abilities are distracted.<sup>197</sup> The same holds true for the policy-makers.

• *The Distraction of Alert Fatigue.* In the military action arena, warnings and alarms are part of standing procedure. A problem of frequent concern is the fact that alerts sounded far outnumber the successfully predicted attacks. Michael Handel cautions that the paradoxical predicament of intelligence organizations is that many alarms which are deemed false in retrospect may actually have been justified when issued: 'although the cause for the alarm is usually known, the defender's intelligence [organization] may find it much more difficult to produce a timely explanation (before the next crisis occurs) as to why the predicted attack failed to materialize'.<sup>198</sup>

This problem provides yet another reason why the Germans were unable to accept the relevant indicators pointing to anything other than a diversion in the Normandy region: the alert fatigue factor. Michael Handel has noted that a 'deceiver frequently tries to create the impression of routine activities by gradually conditioning the adversary to a certain receptive pattern of behavior'.<sup>199</sup> In this context, routine should not be equaled only with a quiet and peaceful pattern of activities. Sometimes it is easier to use a prolonged period of heightened tension to create the required impression.

No military unit can maintain a maximum alert status for an extended period of time without its sense of danger becoming dulled.

A single alert, let alone a series of alerts or a prolonged period of high alert which is not followed by war [or an attack] will have a decisively negative impact on future decisions. A series of false alarms [also] will undermine the credibility of the intelligence organization [or the command issuing the alert] (the so-called cry-wolf syndrome); and by the time subsequent [warning] decisions on similar matters have to be made, [all the] prolonged periods of mobilization and the routinization of alerts will have brought about 'alert fatigue' (i.e., condition the high command and troops to a state of alert and therefore progressively erode their readiness for action). A continual or 'permanent' state of alert can therefore be self-defeating.<sup>200</sup>

Consequently, military forces have multiple alert levels. For the *Wehrmacht*, *Alarmstufe II* was the highest alert status. Between the beginning of April 1944 and D-Day, there were no less than ten maximum alerts along the *Kanalküste*, not counting practice alarms.

With each new alert, the various commanders charged with the

defence of the Normandy sector became less and less sensitive to the expected danger. AOK 7 staff had planned to hold a practice alert on the night of 5 June as part of routine training. When the AOK 7 commander decided to hold a *Kriegsspiel*, the alert exercise was canceled, giving the officers scheduled to assemble at Rennes for the map exercise the chance of a good night's sleep.<sup>201</sup> No one in AOK 7 expected that the invasion was imminent.

The dulled sense of danger was reinforced by the inclement weather conditions along the Channel coast in early June 1944. After receiving a weather briefing at 0600 hours on 4 June 1944, Rommel concluded that the invasion would not come until July. He believed that the enemy planned to use the usually inclement weather in June as a cover for the assembly of ships in the southern ports of England. He ordered all of the beach obstacle construction programs to be completed by 20 June.<sup>202</sup> At 0800 hours on 4 June Rommel left his headquarters at Chateau La Roche Guyon and began a trip that first would take him to his home at Herringen in Germany; he planned to rest, then go to Berchtesgaden on 7 June to plead with Hitler for permission to re-deploy certain OKW Panzer reserves and the LFK III FLAK units in the Normandy sector.<sup>203</sup> Before he left, Rommel told his naval aide, Admiral Ruge: 'It eases my mind to know that while I'm away the tides will be unfavourable for a landing. Besides, air reconnaissance gives no reason to think it's imminent'.<sup>204</sup>

When the invasion did come in Normandy, the officers at the *Führerhauptquartier* immediately labeled it as a diversion because a diversion in that sector had been predicted by Hitler since February. But once the local commanders became engaged in the fighting they quickly realized that the multi-division beachhead was no mere diversion. But Hitler – safely tucked away 1000 km to the east – could not be persuaded that the *Schwerpunkt* would come outside the Pas-de-Calais sector. Since 1943 he had believed that it would come in the Pas-de-Calais region and such an old established idea was not easily changed.

### 7. *The Intelligence Collection Factor*

The Germans simply failed to collect much of the vital information that might have indicated the danger in the Normandy sector. Analysts tend to be over-confident about how much they know.<sup>205</sup> Not only are they convinced that they know more than they do, but also that what they do not know must be unimportant – ignorance is bliss.<sup>206</sup>

Three types of information – weather data; naval reconnaissance data; and aerial reconnaissance data – if properly collected, might have

produced the data needed to alert the units defending the *Kanalküste* during the night of 5 June 1944.

- *Weather Data.* During the period 3–5 June, the weather situation did more than any other single factor to relax the Germans to the threat of imminent invasion. The adverse weather, which they could see for themselves, led them to disregard the apparently clear warning of the attack conveyed by the broadcasts of the *messages personnels*.

The weather on the *Kanalküste* had been generally good throughout May but began to worsen at the beginning of June, and deteriorated significantly early in the afternoon of 3 June. The OKM forecasters predicted that it would remain bad – with rain, low clouds and a moderately high wind – for several days. The German meteorological stations on the Greenland coast were not operational in June 1944. The *Luftwaffe* weather aircraft operating out of Norway did not have the range to cover the gap in the weather intelligence collection program; and there were no *U-Bootes* operating in position to detect the oncoming small area of high pressure.<sup>207</sup> If the German weathermen had seen reports of the high pressure area, a higher state of alert might have resulted.

- *Kriegsmarine Patrols.* On the evening of 5 June, the northern sector of the English Channel was full of Allied ships; but the patrol craft of the *Kriegsmarine* were all in the French Channel ports. Because of the high winds and waves in the Channel, the usual night reconnaissance sorties were canceled.<sup>208</sup> On the one night when naval patrols were needed there were none, and the opportunity for a timely warning was lost.

- *Luftwaffe Patrols.* The bad weather on 4 and 5 June kept most of the *Luftwaffe* reconnaissance aircraft grounded.<sup>209</sup> Five reconnaissance sorties were flown on 5 June but none made contact with the vessels of the invasion force then at sea, and no unusual activity was noted in the ports of England.<sup>210</sup>

During the months of April and May the *Luftwaffe* had managed to fly only 120 reconnaissance missions over Britain.<sup>211</sup> Even then they saw or photographed little of value. On 24 May the *Luftwaffe* conducted overflights of the Dover, Folkestone and Thames River area. It was the first such coverage since 21 May, and would be the last until 7 June. The pilots' reports and aerial photographs indicated no build-up in the number of landing craft assembled. On 24 May the *Luftwaffe* failed to get any reports on the 14 harbors where the loading of hundreds of assault force vessels was actually taking place.<sup>212</sup> Criticism concerning the inadequacy of the coverage was repeatedly voiced, but to no avail.

Interestingly, both Rommel and von Rundstedt considered the meager results of the 24 May air reconnaissance very important. Believing that the main invasion danger was to the Channel coast north of the Seine River, they felt that the final warning of an attack would come in a report of increased enemy activity in the south-eastern ports of Kent. The small number of craft reported in the ports on 24 May indicated to them that the invasion was not imminent.<sup>213</sup>

Worse than their failure to collect the relevant information was the ignorance of the Germans in 1944 of the major gap in their 'agent operations' intelligence collection system. There were two principal reasons for that ignorance.

One was the large volumes of false information fed into the system by the Allies. In fact, the successful layout of the Fortitude South deception resulted solely from the false but credible messages of three British-controlled German agents.<sup>214</sup> By the start of 1944, too, the Germans were looking for information to confirm their invasion hypothesis, not to raise new fears. Much of the information they collected from the controlled agents confirmed what they already believed; consequently, they thought they were getting corroboration.

The Germans did not know, or even seriously suspect that all their agents in Britain were acting as double agents under the control of British intelligence, that the English were reading the German Enigma cipher machine transmissions, or that the Japanese Purple code had been broken by the Americans. The Germans never seem to have grasped the simple notion that sources as well as plans must be guarded.<sup>215</sup> Being able to read the enemy's mind – at least in the sense of Ultra, Magic, and the Double-Cross system – gave the Allied planners at SHAEF a tremendous strategic advantage. In this sense, the Normandy landings may have been unique in that for planning and deception purposes the Allies had a virtually perfect intelligence system.

#### 8. The Deception Factor

- *Passive Deception.* The twin aspects of passive deception are *secrecy* and *cover* (or camouflage).

*Secrecy.* Secrecy is an important tool of strategic interaction.<sup>216</sup> In strategic interaction, secrecy performs the special function of concealing plans without the risk of using a distorted mirror, an ineffective mask, or a bare-faced lie. If the adversary is misled, it is because he has not been exposed to strategic information.<sup>217</sup>

While good secrecy is obviously desirable, perfect security is rarely attained, and yet, deceptions regularly succeed and surprise is achieved

without it.<sup>218</sup> Indeed, Barton Whaley's study of 68 modern cases of strategic surprise revealed that in every case some sort of a warning or an indicator signaled the event.<sup>219</sup>

The Allied planners knew that the Germans knew that the big invasion was coming. They also knew that they could camouflage and conceal the deployment of men and material for the invasion, but not completely. The SHAEF planners believed that by stringent security controls they could keep the actual day, time, place and size of the attack secret, but that other information would eventually leak out. In spite of several potentially very dangerous security violations, the vital information, all protected by the BIGOT clearance, was never discovered by the Germans.<sup>220</sup>

*Cover.* Cover is synonymous with camouflage. What cannot be kept secret is disguised.<sup>221</sup> Cover also means to conceal or hide. The Allied cover efforts did more than just disguising and hiding things. In areas where the Allies did not want the Germans observing invasion preparations, special care was taken to keep the *Luftwaffe* aerial reconnaissance away. Because it proved easier for the enemy pilots to make 'snap and run' sorties over the Kent and Sussex counties German photo-interpreters were provided with reasonable coverage of the areas where the Allies wanted them to focus their attention.<sup>222</sup>

- *Active Deception.* Realizing that the Germans were bound to discover certain information about the invasion preparations, the Allies used the existing German collection system to advantage. To encourage and reinforce the German fears and expectations about the Pas-de-Calais region, the deception effort – Operation Fortitude – was mounted to ensure that there was no lack of palpable indications pointing to a large-scale attack in that sector.<sup>223</sup>

During the QUADRANT Conference held in mid-August 1943 at Quebec, the Allied invasion planners were directed to prepare a deception plan to support the invasion.<sup>224</sup> In addition to supporting the Overlord/Neptune invasion plans, it had to be in agreement with the Europe-wide deception plan, Operation Bodyguard.<sup>225</sup> The planners went to work and on 13 February 1944 promulgated Operation Fortitude.<sup>226</sup> It was:

A broad plan covering deception operations in the European theater, with the object (a) to cause the Wehrmacht to make faulty strategic dispositions in north-west Europe before *Neptune* by military threats to Norway, (b) to deceive the enemy as to the target date and target area of *Neptune*, (c) to induce [the enemy to make] faulty tactical dispositions during and after *Neptune* by threats against the Pas-de-Calais.<sup>227</sup>

In the broadest sense Operation Fortitude was designed to support Operation Overlord/Neptune simply by pinning down the *Wehrmacht* divisions. The deception plan was mounted, and it worked.<sup>22</sup> 'It was an impressive tribute to the success of the Allied deception plans that every key German commander greeted the news of operations in Normandy as evidence of *an* invasion, not *the* invasion' – the *Schwerpunkt*.<sup>23</sup>

A few points need to be made regarding implementation of the Fortitude plan. First, while the plan was elaborate, its central plot or theme was very simple. As Ewen Montagu has aptly pointed out: 'We had no illusions about the efficiency of the German *Abwehr*, so we had to make sure that the puzzle was not too difficult for them to solve'.<sup>24</sup> This brings up the second key point:

One overwhelming conclusion stands out with respect to deception: it is far easier to lead a target astray by reinforcing the target's existing beliefs, thus causing the target to ignore the contrary evidence, than it is to persuade a target to change his ... mind.<sup>25</sup>

The target of the Fortitude deception was Hitler himself. Through the Ultra/Magic intercepts, the Allied planners knew what Hitler expected – a *Schwerpunkt* in the Pas-de-Calais, with several large diversions – and played to it. The same intercepts confirmed that Hitler had taken the bait – the third key point. The success of a deception plan depends on feedback from the target.<sup>26</sup> Thus, Fortitude kept Hitler's attention focused where he believed it should be focused.

#### 9. The Time Factor

As it affects the acquisition, analysis and acceptance process, there are at least four ways in which time has a special importance.<sup>27</sup>

• *Time and the Event Horizon*. Every intelligence issue involves 'timing'. Is the problem one of explaining an event that has already happened, or of making a prediction about the future? It makes a difference whether the analyst is acting as a 'reporter' or an 'oracle'. It is in anticipating the event where most often the estimative process fails. If an event has not occurred, then it follows that the indicators that would flow from it do not exist and cannot be perceived. This fact is often overlooked by men who ought to know better.

Operation Archery, the raid of 27 December 1941 at the fishing port of Måløy on the Norwegian coastal island of Vågsoy by a British naval task force, focused Hitler's mind on the danger to Norway and to the whole coast in north and west Europe.<sup>28</sup> The Führer began to talk of turning Europe in an impregnable fortress – *Festung Europa*. Hitler

visualized a belt of strongpoints and gigantic fortifications running from the Norwegian-Finnish border to the Franco-Spanish border.<sup>29</sup> Thus the German defensive building and the search for the relevant indicators of the Allies' true invasion intentions preceded by as much as 18 months the actual decisions. It was at the RATTLE Conference on HMS *Warren* at Largs, Scotland, from 28 June to 2 July 1943 that senior Allied officers decided that north-west Europe would be invaded in the Normandy sector and not on the Pas-de-Calais coast.<sup>30</sup>

Premature though their quest might be, in order to prepare the massive *Atlantikwall* structures that Hitler's coastal 'crust' defense doctrine envisaged, the Germans could not afford to wait until their adversary had decided upon a landing site or sites.<sup>31</sup> *Grossadmiral* Dönitz at OKM called the problem of prematurity the 'Defender's Dilemma'.<sup>32</sup> In order to know where and what to build the Germans literally had to know the unknowable. To make matters worse, once they began to prepare their defenses, they were at risk that the enemy might change their plans and shift the focus of the attack away from the fortified areas.<sup>33</sup> A self-negating paradox illustrates the point: warnings of an enemy attack may lead to a counterplan which, in turn, may prompt the enemy to delay or cancel his original plan.<sup>34</sup>

• *Time and the Perception Horizon*. Time impacts on the process of perception. Intelligence analysis and command acceptance are incremental processes. Seldom, if ever, do the facts bearing on a particular intelligence problem all arrive in one tidy bundle. Thus, the point at which facts are noted or an estimate is forwarded to a policymaker has special relevance. Richard Heuer has aptly noted that 'if we consider the circumstances under which accurate perception is most difficult, we find these are exactly the circumstances under which intelligence analysis is generally conducted – dealing with highly ambiguous situations on the basis of information that is processed incrementally under pressure for early judgment'.<sup>35</sup> New information tends to be assimilated with existing data; thus the actual order in which information is received affects judgement because evidence received early has a greater impact than evidence received after first impressions are formed.<sup>36</sup>

As the Germans had earlier predicted that the *Schwerpunkt* would come in the Pas-de-Calais sector, new evidence – available only after the Allies actually had decided to land in Normandy – came as small and incremental additions to an estimate that had been finalized and was being acted upon. In this context, time and the organizational bias mixed:

[There are real] organizational pressures favoring consistent

interpretation, for once the analyst has committed him- or herself in writing, both the analyst and the organization have a vested interest in maintaining the original estimate.<sup>243</sup>

It is hard enough to change an estimate once it is committed to paper and disseminated; it is virtually impossible to change one which figuratively is carved in stone in the form of concrete bunkers. Once the Führer himself had given his imprimatur to the estimate that the *Schwerpunkt* would be in the Pas-de-Calais, the *Organization Todt* began constructing on the basis of that belief. It was a case where early judgements were literally cast in cement.

• *Time and the Analysis Horizon.* The analytical process of distinguishing between signals and noise requires time.<sup>244</sup> In many intelligence matters there is simply not enough time to do a proper job of collection, analysis and dissemination. Time, in this regard, did not affect the Germans. However, having too much time can also degenerate the analytical and acceptance process. It is clear that the Germans had more than enough time to collect and analyse the intelligence information they needed to make the required command judgments. But an early judgement can adversely affect the formation of future perception; once an analyst thinks he knows what is happening, such perception tends to resist change.<sup>245</sup> For the Germans the early judgement about the Pas-de-Calais sector was locked into the thinking of both intelligence and command analysts, and it did not alter with time.

Where there is ample time for analysis there may also be ample time for deception – and there certainly was time for an elaborate deception before the Allied invasion. This is a nice paradox: when the analyst has the most time for reflective assessment, he is most liable to be the victim of deception.

• *Time and the Warning Horizon.* One function of military intelligence is to give the commander early warning of the imminence of hostile action so that he, in turn, can warn his units.<sup>246</sup> An important question is whether all the *Wehrmacht* divisions guarding the *Kanal-küste* should have gone to a partial alert on 1 June 1944 when the BBC broadcast part one of the *messages personnels* to the French. Another is whether all the units in the AOK 7 (Normandy) and AOK 15 (Pas-de-Calais) sectors ought to have gone to, and remained at, *Alarmstufe II* on the evening of 5 June when the second lines of the clear text alert codes were broadcast. The AOK 15 units did go to a full alert, but those of AOK 7 did not.

Actually, the failure of AOK 7 to go to full alert on the evening of 5 June made little difference to the first 24 hours' fighting. Once the

invasion scenario began to unfold around midnight on the night of 5/6 June, the local units implemented their prearranged defense plans. It seems clear that nothing short of moving the powerful Panzer reserves into forward positions immediately adjacent to the invasion beaches weeks before the landings – as Rommel wanted – would have helped much.<sup>247</sup> The lack of a tactical warning probably did not make a critical difference – the lack of strategic warning did.

#### 10. *The Organization Factor*

From mid-1934 until very early in 1944, the two major German overseas intelligence collectors, the *Abwehr* and the *RSHA* were involved in an interagency bureaucratic competition,<sup>248</sup> resulting in the take-over of the *Abwehr* counter-intelligence and foreign agent operations by the *RSHA*.<sup>249</sup> This process started on 12 February 1944 and was completed on 1 June.<sup>250</sup> At a time when a smooth and efficient collection effort was most needed, the slow process of reorganization hindered such action and *RSHA* was not able to correct the other's faults before the invasion came.

Interesting as the ten-year struggle between the *Abwehr* and *RSHA* may be, the inter-agency rivalry did not amount to much in terms of actual intelligence production by the *Abwehr*, even during the February–June 1944 transition period. On balance, the end of the rivalry and the initiation of the absorption process did not materially contribute to the Germans' failure to appreciate properly the intentions of the Allied planners. The 'victory' of *RSHA* and the fusing of the two intelligence services was merely a chance event that coincided with the final days of Allied invasion planning. The *Abwehr* failed in 1939–41 as a foreign intelligence collection organization for reasons other than the inter-agency rivalry. Its problems resulted from a real failure of leadership by Admiral Canaris and his immediate staff.

The other major organizational failure of the Germans was in not coming to grips with what was to be the proper rôle of the strategic military intelligence estimate or appreciation. The traditional German view was that the ultimate responsibility for 'building the picture' of the enemy was that of the commander and not the intelligence analyst.<sup>251</sup> Hitler took this concept to an unnatural extreme, deeming himself alone 'qualified to make authoritative foreign assessments'.<sup>252</sup> Now this sort of rule of practice may have some merit when a tactical commander limits his judgemental combat visions to the tactical horizon of estimation and when the politician limits his estimates to the political arena. But neither the senior officers of OKW – trained to direct an 'in-contact land-battle' force – nor the Führer were capable of making

reliable strategic military assessments without the assistance of a reliable intelligence organization. They tried to do it and failed.

Hitler made his decisions based on hasty appraisals of the situation while surveying a map table, and without taking into consideration the practical difficulties involved.<sup>23</sup> One officer at OKW, General *der Artillerie* Warlimont, described the Führer's decision-making style thus:

Hitler grasps the operational idea without [ever] giving any consideration whatsoever to the necessary [military] means, the necessary time and space, troops and supplies. Those are the fundamental elements of strategy which are necessary for success, but Hitler rarely took them into consideration.<sup>24</sup>

If Hitler had no need for information about his own army and its capabilities, what need did he have for intelligence information about his enemy's capabilities or intentions? The answer was none.

Obviously the rôle of German strategic intelligence was not to serve the Führer in his decision-making task. In fact, it never had a mature rôle in the German war-fighting effort. Beginning in 1943, when the *Wehrmacht* went on the defensive, the German general officers began to ask OKH/FHO for more than just OB data, and the work at *Fremde Heeres Ost*, and later FH West, began to involve the preparation of strategic estimates. But by the time the 'fighting' officers of the *Wehrmacht* began to realize that they needed better intelligence – more than just tactical estimates – just to survive on the battlefield, it was too late to create either the professional staff to provide it, or the collection organization to support the analysts.<sup>25</sup>

At this point it must be emphasized that 'intelligence' had a rôle in Germany during the war, but it was one that the *Abwehr* and RSHA dealt with mainly in terms of internal defense – counter-intelligence and counter-espionage – and in that regard the *Abwehr* and RSHA were ruthlessly efficient.<sup>26</sup> The tactical aspect of intelligence was also generally good.<sup>27</sup> It was strategic military intelligence that never had a properly defined and workable rôle.

It is equally important to note that merely because the OKW and the Führer felt no real need for strategic military intelligence for decision-making purposes does not mean that it was not produced. It was simply produced on a decentralized basis. Under the German analysis system there could be, and usually were, as many as 14 different estimates at any one time concerning the potential threat to Western Europe. The same original information was viewed by each analysis center according to its own parochial interest.<sup>28</sup> More often than not, the resultant estimates reflected the reactions of the individual commanders to the

unevaluated raw information as it tended to support their personal theories. The object was not to produce an agreed position; instead the various estimates were in the nature of *post hoc* rationalizations of what the particular command or agency was doing. This is an extreme example of multiple advocacy with no effective way to bring divergent views to the attention of the Führer. Only on rare occasions did Hitler see the various estimates. Schellenberg at RSHA/SD and Hitler's staff filtered all intelligence reports so that the Führer did not receive any of the disagreeable reports<sup>29</sup> except on rare occasions, like 17 June 1944, when the front-line commanders had personal conferences with him.<sup>30</sup> In the end, and by default, Hitler's opinion became – for better or for worse – the agreed estimate.

Even on so crucial an issue as the expected place of the invasion there was no agreement. Hitler, von Rundstedt and Rommel all believed that the enemy's main attack would come in the Pas-de-Calais region, but the three of them could never agree about where within the sector, with its 400 kilometers of coastline, the main blow would probably be delivered. Nor was the need to reach agreement on that point even perceived.

By 1944, the Germans simply did not have a realistic organizational structure capable of dealing effectively with the strategic intelligence problem. But by then it was too late to do anything about the organizational deficiencies – even if Hitler and Jodl had recognized a problem existed. There may be situations where a few changes in the organizational structure of an intelligence staff may improve the collection or analysis process, but that takes time. The Germans had neither the time nor the inclination to reorganize theirs.

## SURPRISE

Because of the ten factors – and, in the sense of the Gestalt, their interaction and reinforcing effect – the ability of the Germans to collect, perceive, analyse properly and act on the relevant Normandy invasion indicators was weak and inefficient. Their analysis process developed pre- and post-invasion intelligence and command estimates which, while apparently rational and logical in development, simply were wrong. As a result, the Germans suffered both a tactical and a strategic surprise on 6 June 1944, and for some considerable time they continued to be the victims of strategic surprise. This, with the resulting confusion of the battle, caused them to make very serious mistakes in their counter-invasion planning. In the end they were unable to destroy the Allied beachhead. Thus, the D-Day invasion is one of the rare



occasions where the attacking force achieved both a strategic surprise and the final victory.

The fact that an attacker achieves an initial surprise does not mean that surprise alone will carry the day. For, as Napoleon has said: 'Uncertainty is the essence of war, [and] surprise its rule'.<sup>241</sup> If anything, history consoles military men and political leaders with the observation that there is no direct correlation between an enemy achieving the highest degree of surprise at the outbreak of a battle or war and ultimately emerging victorious.<sup>242</sup> Michael Handel notes that 'one reason for this is that the attackers are often so amazed by the effectiveness of their own attack that they are caught unprepared to fully exploit the opportunities it presents'.<sup>243</sup> It is equally important to remember the corollary to this rule: 'To know your enemy's intentions is fine, but such knowledge does not always mean that you can stop him'.<sup>244</sup>

There is nothing very extraordinary in the German estimative failure. There is no credible evidence to support the proposition that the failure of the Germans to anticipate the Allied *Schwerpunkt* in Normandy was the result of any single instance of negligence, stupidity, treachery, or a conspiracy of silence. Rather, the roots of the problem lie in the circumstances which naturally tend to affect even honest, dedicated and intelligent men.<sup>245</sup> The surprise of D-Day all came to pass through a series of quite complicated but, nevertheless, extremely ordinary mistakes of decision analysis.

It is interesting to note that the Germans appear to have made every possible mistake. In retrospect it almost seems that they set out to be the textbook example of what not to do in war. In the context of the times, the men, the organizations, and the analysis methods combined to produce a situation which made strategic surprise inevitable *for them*. Though the surprise came like a bolt from the blue it was not the result of chance; instead it was deliberately planned for and skillfully attained. Accordingly, while some may contend that in the broad sense strategic surprise is inevitable, it is not proper to draw that conclusion from the Normandy experience. Since this study concerns but a single case, it would be inappropriate to project the findings here regarding the inevitability of surprise to a universal case.

#### IMPLICATIONS

The major reasons for the German intelligence and command failure in regard to the D-Day invasion of Normandy have been identified; it now remains to determine whether a knowledge of the causes of that failure in 1944 has any relevance to intelligence collection officers, or to

intelligence analysts, or to commanders or executive decision-makers in the late 1980s and beyond.<sup>246</sup> Particularly important is whether such knowledge is of any value to the military intelligence officers and military commanders of the United States in the modern era. Clearly, such knowledge is both relevant and critical: it is vitally important now, and it will continue to be important for decades to come.

The German failure is by no means unique. It can be matched by many other examples of nations and their armies failing to perceive properly and react to military or terrorist threats.<sup>247</sup> In fact, current examples – in both the military and the political context – are virtually countless. The big surprise today is that so many people who ought to know better seem to be surprised by surprise.<sup>248</sup>

Strategic surprise in the opening phase of war is the most powerful force multiplier in conventional war.<sup>249</sup> The failure of the Germans, and many similar intelligence and command failures, underscore the hard truth that a nation at war, on the brink of war, or existing in a cold war or in a terrorist-sensitive situation cannot count on any strategic warning and may not even receive any sort of a local tactical warning in time to react properly to a threat. Accordingly, in order to increase the likelihood that a nation or its armed forces will receive adequate warning – and that is at least assumed to be an attainable goal – increased attention must be paid to the reasons for past failures.<sup>250</sup> If the factors that have caused other intelligence collectors, analysts and information users to go astray in their decision-making process are understood, then perhaps those charged with preparing future estimates may be able to avoid the analytical pitfalls.<sup>251</sup> Similarly, commanders and policy-making executives who must use intelligence estimates, or make their own, may better understand the likelihood of an estimative failure. Gaining a real and lasting sensitivity to the probability of an estimative failure may be the most valuable lesson to be learned from this type of historical case-study.

It is probable that no system of intelligence collection and analysis, and no system of command, control and warning, can be devised and staffed which will totally eliminate the identified perception inhibitors. While military technology has revolutionized almost every aspect of modern military doctrine and tactics, the one area in which it has made little progress is that of anticipating surprise attack; thus the 'far-reaching advances in the technical means of gathering intelligence information, and the greater awareness of political and perceptual mechanisms undermining the intelligence process has not yielded corresponding progress in the ability to anticipate strategic surprise'.<sup>252</sup> The reason why this is so is quite simple. Today, as in the past, intelligence collection and analysis, and command decision-making,



despite access to all sorts of high-technology gadgetry, 'is still based on the human factor. As it is labor intensive, [all] intelligence work [and command decision-making] must reflect human nature, not technological excellence'.<sup>273</sup> The old saw that 'to err is human' packs a more fundamental truth than intelligence analysis and policy-makers care or dare to admit.

It is dangerous and probably wrong to believe that strategic surprise is inevitable – it only seems so. Indeed, the statistical evidence only supports the conclusion that it is highly probable. Many analysts and policy-makers have, at best, an imperfect understanding of the root causes of strategic surprise; i.e., a lack of understanding about how and why the analysis process fails. This article, if its purpose has been achieved, will shed some light on the reasons why strategic surprise has not been avoided in the past. It is hoped, too, that with understanding the effect of the ten 'fog factors' can be minimized and the process of estimative analysis – the real craft of intelligence – improved.<sup>274</sup> The goal of every analyst should be to improve his vital craft the better to serve those whose decisions must necessarily be based on reliable intelligence and estimates. For the real craft of intelligence, 'is to make the right deductions and present them to the commander in clear and logical form', with the object, in the midst of so much recognized uncertainty, that 'the so-called fog of war [is] ... seldom more than a mist'.<sup>275</sup>

## NOTES

This is a condensed version of a paper presented at the US Army War College Conference on 'Intelligence and Military Operations', Carlisle Barracks, Pennsylvania, 22–25 April 1986. The views expressed are those of the author and do not reflect the official policy or position of the Department of Defense or the US government.

1. For 'out of the blue' see Michael I. Handel, 'Intelligence and Deception', *Journal of Strategic Studies*, Vol. 5 (March 1982), 149.
2. Several modern writers have concluded that strategic surprise 'comes close to being inevitable': Michael I. Handel, 'Clauswitz in the Age of Technology' (Monograph, US Army War College, 1985), p. 74, n. 29. Also, *idem*, 'Intelligence and the Problem of Strategic Surprise', *Journal of Strategic Studies*, Vol. 7 (Sept. 1984), 229–82; *idem*, 'Intelligence and Deception', 137; Klaus Knorr, 'Lesson in Staircraft', in Klaus Knorr and Patrick Morgan (eds.), *Strategic Military Surprise: Incentives and Opportunities* (New Brunswick, NJ: Transaction Books, 1982), p. 256; Ronald G. Sherwin and Barton Whaley, 'Understanding Strategic Deception: An Analysis of 93 Cases', in Donald C. Daniel and Katherine L. Herbig (eds.), *Strategic Military Deception* (New York: Pergamon Press, 1981), p. 179; Richard K. Betts, 'Analysis of War and Decision: Why Intelligence Failures are Inevitable', *World Politics*, 31 (Oct. 1978), 61–89.
3. 'World Battlesfields', *Time*, 1 May 1934, 23.
4. Army Times Editors, *The Tangled Web*, (Washington: Robert H. Luce, 1963), p. 144.

5. For a factual study, see T.L. Cubbage II, 'Anticipating Overlord: Intelligence, Deception and Surprise – German Estimates of Allied Intentions to Land Invasion Forces in Western Europe' (diss. Defense Intelligence College, 1969, retyped and edited 1985). See also Cubbage, 'Anticipating Overlord: Was Strategic Surprise Inevitable?' a paper presented at the Intelligence and Military Conference, 22–25 April 1986 (the longer version of this article).
6. Niccolò Machiavelli, *Il Discorsi*, I, 56 (1531); Walter Laqueur, *The World of Secrets: The Uses and Limits of Intelligence* (New York: Basic Books, 1985), p. 305.
7. David Irving, *The Trail of the Fox* (New York: E.P. Dutton, 1977; New York: Avon Books, 1978), p. 424.
8. Overlord was the code name for the overall plan for the invasion of northwest Europe in 1944, and Neptune was the code name for the actual operations plan within the Overlord concept.
9. 'Magic' Summary No. 677, 1 February 1944, A1, SRS 1198, Records of the National Security Agency, Record Group 457, Modern Military Records (MMR), National Archives (NA) Washington, DC.
10. A comprehensive collection of reports are contained in the War Diary of the Operations Division of the German Naval High Command. The intelligence section of that diary shows that reports, from all sources, got wide dissemination. See *Seefriedelegung, I Abteilung, Kriegstagebuch, Tiele A, 116ff 49–58, 1 V 43–31 V 44*, Chief of Naval History Repository, Washington, DC.
11. Walter Wallimont, *Inside Hitler's Headquarters 1939–45*, trans. R.H. Barry (New York: Praeger, 1976), p. 427; John Toland, *Adolf Hitler* (New York: Ballantine Books, 1976), p. 566.
12. Chester Wilmut, *The Struggle for Europe* (New York: Harper & Brothers, 1952), p. 248.
13. Lionel Frederic Ellis, *Victory in the West: The Battle for Normandy* (London: HMSO, 1962), p. 322.
14. Jack Haswell, *D-Day: Intelligence and Deception* (New York: Times Books, 1979), p. 184.
15. Samuel Eliot Morison, *History of United States Naval Operations in World War II: The Invasion of France and Germany* (Boston: Little, Brown & Co., 1957), p. 13.
16. Fortitude was the code name given to the plan outlining a part of the strategic deception policy for the war against Germany in conjunction with Overlord. See SHAEF/18209/Op(b), 3 June 1944, Records of SHAEF, Record Group 381, File No. Fortitude, MMR, NA; and Plan 'Bodyguard', Combined Chief of Staff, C.C.S. 459/2, 20 January 1944, w/encl., Records of SHAEF, *ibid*. See also Roger Fleetwood Hesketh, 'Excerpt from Fortitude: A History of Strategic Deception in North Western Europe, April 1943 to May 1945; Conclusion', in Donald C. Daniel and Katherine L. Herbig (eds.), *Strategic Military Deception* (Elmsford, New York: Pergamon Press, 1981), pp. 233–42; Barry D. Hunt, 'An Eyewitness Report of the Fortitude Deception: Editorial Introduction to R.F. Hesketh's Manuscript', in *Strategic Military Deception*, *ibid*, 224–32; Cubbage, 'Anticipating Overlord', 52–60, 250–52; Cruickshank, *Deception in World War II*, pp. 83–203; and Jack Haswell, *The Tangled Web: The Art of Tactical and Strategic Deception* (Wendover: John Goodchild, 1985), pp. 92–108, and 147–50.
17. 'Double-Cross' is the descriptive name given to the 'XX' or Twenty Committee, a group reporting to London Controlling Station, whose task it was to manage all of the double agent operations in England. For more on the clever work and methods of the Twenty Committee, see J.C. Masterman, *The Double-Cross System in the War of 1919 to 1945* (New Haven, CT: Yale University Press, 1972), *passim*; and Ewen Montagu, *Beyond Top Secret Ultra* (New York: Coward, McCann and Geoghegan, 1978), *passim*.
18. 'Ultra' was the British code name given to intelligence derived from decrypting German Enigma-enciphered radio messages. 'Magic' was the American code name given to intelligence obtained from decryption of the Japanese machine-

enciphered radio messages. The American radio station at Asmara, Ethiopia, intercepted the wireless messages from Japanese diplomatic and military attaché personnel in Western Europe. The message to Tokyo from General Hiroshi Baron Oshima, the Japanese Ambassador in Berlin, and others, provided the Allies with valuable insights into both the intentions and capabilities of the Germans. The British intercept sites in England obtained information of a tactical and operational nature. For more on Ultra, see F.W. Winterbotham, *The Ultra Secret* (New York: Harper & Row, 1974), passim; Ronald Lewin, *Ultra Goes to War* (London: Hutchinson, 1978; New York: Pocket Books, 1980), passim; Ralph Bennett, *Ultra in the West: The Normandy Campaign of 1944-45* (London: Hutchinson, 1979; New York: Charles Scribner's Sons, 1980), passim; Thomas Parish, *The Ultra Americans: The U.S. Role in Breaking the Nazi Codes* (New York: Stein & Day, 1986), passim. As regards the use of Magic in the European Theater, see Ronald Lewin, *The American Magic: Codes, Ciphers and the Defeat of Japan* (New York: Farrar Straus Giroux, 1982), pp. 10, 12-13, 46, 204-17, 232-46.

19 Michael Handel properly notes that 'past failures in avoiding surprise cannot be blamed on a dearth of information and warning signals. Accordingly we must look to the levels of analysis and acceptance for an answer. Michael I. Handel, 'Strategic Surprise: Politics of Intelligence and the Management of Uncertainty', in Alfred C. Maurer, Marion D. Tunstall James M. Keagle (eds.), *Intelligence: Policy and Process* (Boulder, CO: Westview, 1985), p. 245.

20 The essence of good intelligence is 'timely truth, well told'. Washington Platt, *Strategic Intelligence* (New York: Praeger, 1957), p. 33.

21 Handel, 'Strategic Surprise', p. 259.

22 Michael I. Handel, 'Strategic Surprise: The Politics of Intelligence and the Management of Uncertainty (First Draft)', (US Army War College, Photocopy, 1985), p. 36.

23 Horst Boog, 'German Air Intelligence in World War II', paper presented at the Intelligence and Military Operations Conference, US Army War College, Carlisle Barracks, Pennsylvania, 22-25 April 1986, pp. 3-4.

24 Handel, 'Strategic Surprise', p. 259.

25 Ibid.

26 Alan Bullock, *Hitler: A Study in Tyranny*, abridged ed. (1964; reprint, New York: Perennial Library, Harper & Row, 1971), p. 423.

27 Ibid.

28 Wilmut, *Struggle For Europe*, 161.

29 Bullock, op. cit.

30 Wilmut, op. cit.

31 Handel, 'Strategic Surprise', p. 260. ('Members of his entourage were often as surprised as were the victims of his moves ... Such decisions, generally made on the spur of the moment, are very difficult to anticipate.')  
 Samuel W. Micham, Jr., *Rommel's Last Battle: The Desert Fox and the Normandy Campaign* (New York: Stein and Day, 1983), p. 21.

32 Knorr, 'Lessons in Statecraft', pp. 237-8.

33 Boog, 'German Air Intelligence', p. 5.

34 Donald McLachlan, Room 39: A Study in Naval Intelligence (New York: Atheneum, 1968), p. 344. According to McLachlan, the one thing that all the outstanding intelligence officers he knew had in common was 'common standards of exact scholarship'. He viewed the intelligence service as 'a new learned profession'. Ibid, p. 346.

36 Klaus Knorr, 'Failure in National Intelligence Estimates: The Case of the Cuban Missile Crisis', *World Politics* 16 (April 1964), p. 460. See also, David Kahn, *Hitler's Spies* (New York: Macmillan, 1973), p. 533 ('they could ... express their opinions more forcefully').

37 Handel, 'Intelligence and Deception', 140.

38 Ibid, 141.

39 Arthur Bryant, *Triumph In The West: A History of the War Years* (Garden City, New York: Doubleday, 1959), p. 142.

40 McLachlan, Room 39, p. 343.

41 In February 1943 OWK/WFST issued a warning to all commands and staffs stating that the Soviet and Allied forces were trying to mislead and deceive the Germans. F.H. Hinsley, E.E. Thomas, C.G.G. Ransom, and R.C. Knight, *British Intelligence in the Second World War: Its Influence on Strategy and Operations*, Vol. III, Pt. 1 (London: HMSO, 1979), p. 120.

42 Handel, 'Strategic Surprise', p. 260.

43 John P. Campbell, 'D Day 1943: The Limits of Strategic Deception', *Canadian Journal of History* (1977), 234-5.

44 Paul Seabury, 'Knowing Who's Who', *The International Journal of Intelligence and Counterintelligence* 1 (Spring 1986), p. 123; quoting from Michael Gayer, 'National Socialist Germany', in Ernest May (ed.), *Knowing One's Enemies* (Princeton, NJ: Princeton University Press, 1985), p. 343.

45 Handel, 'Intelligence and Deception', p. 140.

46 Kahn, *Hitler's Spies*, p. 524.

47 Ibid, p. 531.

48 To better understand the traditional Wehrmacht officer class, see T.N. Dupuy, A *Genius for War: The German Army and General Staff, 1807-1945*. (Fairfax, Virginia: HERO Books, 1984), passim.

49 McLachlan, Room 39, p. 341.

50 W. von Mellethin, *German Generals in World War II* (Norman, OK: University of Oklahoma Press, 1977), p. 82.

51 Harold C. Deutsch, 'Ultimate Consumers: Intelligence and the Operational Art in World War II (ETO)', paper presented at the Intelligence and Military Operations Conference, US Army War College, Carlisle Barracks, Pennsylvania, 22-25 April 1986, p. 40.

52 McLachlan, Room 39, p. 344.

53 Ibid.

54 W.D. Howells, 'Intelligence in Crises', in George R. Copley (ed.), *Defense '83* (Washington, DC: D&A Conference, Inc., 1983), p. 349.

55 Richard J. Heuer, Jr., 'Cognitive Factors in Deception and Counterdeception', in Donald C. Daniel and Katherine L. Herbig (eds.), *Strategic Military Deception* (Elmsford, NY: Pergamon Press, 1981) p. 32.

56 Ibid.

57 Ibid, citing Kenneth Booth, *Strategy and Ethnocentrism* (New York: Holmes & Meier, 1979).

58 Kahn, *Hitler's Spies*, p. 141.

59 Handel, 'Strategic Surprise', p. 259.

60 Ibid; Bullock, *Hitler*, p. 6.

61 Handel, 'Strategic Surprise'.

62 Handel, 'Strategic Surprise (First Draft)', p. 30.

63 Heuer, 'Cognitive Factors' in Daniel and Herbig (eds.), op. cit., p. 32.

64 Klaus Knorr, 'Strategic Surprise: The Incentive Structure', in Knorr and Morgan (eds.), op. cit., p. 176.

65 Handel, 'Strategic Surprise', p. 260.

66 Jesse Goldstaub, 'Risk Intelligence Analysis and Forecasting: Policy Gambling and the Catastrophic Event' (Occasional paper, University of Calgary, Faculty of Management, 1984), p. 9.

67 Warlinton, *Inside Hitler's Headquarters*, p. 587, n. 1.

68 Kahn, *Hitler's Spies*, p. 524.

69 Roy Godson, 'General Discussion: Avoiding Political and Technological Surprise in the 1980's', in Roy Godson (ed.), *Intelligence Requirements for the 1980's: Analysis and Estimates*, (New Brunswick, NJ: Transaction Books, 1980), p. 118.

70 Knorr, 'Lessons in Statecraft', p. 249.

71 Michael J. Brenner, 'The Iraq-Iran War: Speculations About a Nuclear Re-Run',

- Journal of Strategic Studies*, Vol. 8 (March 1985), 32.
72. See Richard K. Betts, 'Strategic Surprise for War Termination: Inchon, Dien-bienphu and Tet', in Knorr and Morgan (eds.) op. cit., p. 169.
73. Heuer, 'Cognitive Factors', p. 32.
74. *Ibid.*, p. 56.
75. *Ibid.*, p. 63.
76. *Ibid.*
77. *Ibid.*, p. 44.
78. *Ibid.*
79. *Ibid.*
80. Kevin McKean, 'Decisions, Decisions', *Discover* (June 1985), 26.
81. *Ibid.*
82. Heuer, 'Cognitive Factors', p. 45.
83. *Ibid.*, p. 50.
84. *Ibid.*
85. *Ibid.*, pp. 51-2.
86. *Ibid.*
87. *Ibid.*, p. 53.
88. *Ibid.*, p. 54.
89. *Ibid.*
90. *Ibid.*, p. 32.
91. *Ibid.*, pp. 31-32, citing Herbert A. Simon, *Models of Man: Social and National* (New York, Wiley, 1957).
92. Heuer, 'Cognitive Factors', p. 32.
93. Theodore R. Sarbin, 'Prolegomenon to a Theory of Counter-deception', in Daniel and Herbig (eds.), op. cit., p. 157.
94. *Ibid.*, p. 158.
95. *Ibid.*
96. *Ibid.*, p. 160.
97. *Ibid.*, p. 161.
98. *Ibid.*, p. 168.
99. *Ibid.*, p. 168.
100. Goldstaub, 'Risk Intelligence Analysis and Forecasting', p. 4. Questions being asked and information being accepted are subject to the ethno- and geo-centric predilections of policy-makers, their biases in terms of cultural perspective and logic, and both their doctrinal allegiances and political mind-set. This mandates that those who make decisions and formulate policy are asked 'What makes YOU afraid?'
101. David Mure, *Master of Deception* (London: William Kimber, 1980), p. 101.
102. The statistical approach was labeled 'sagacity' by Karl E. Scheibe, *Mirrors, Masks, Lies and Secrets* (New York: Praeger, 1979).
103. Sarbin, 'Prolegomenon to a Theory', p. 162.
104. *Ibid.*, p. 152.
105. *Ibid.*
106. *Ibid.* In such a situation, the analyst can use the case study (the intuitive or clinical) methods, where predictions (from the available data allow for either tinkering with or ignoring the base rates).
107. Sarbin, 'Prolegomenon to a Theory', p. 162.
108. Laqueur, *World of Secrets*, p. 292.
109. *Ibid.* For more on 'empathy', see Ralph K. White, 'Empathy as an Intelligence Tool', *The International Journal of Intelligence and Counterintelligence*, 1 (Spring 1986), 57-75.
110. Sarbin, 'Prolegomenon to a Theory', p. 168.
111. See C.O. (R) 25, July 1943, 'Rattle', Record of a Conference held at HMS Warren from 28 June to 2 July to Study the Combined Operations Problems of 'Overlord', 93, Records of SHAEF, Record Group 331, File No. 337/16 *Rattle Conference*, AFMR, NA.

112. Heuer, 'Cognitive Factors', p. 34.
113. *Ibid.*, p. 35.
114. *Ibid.*, p. 34.
115. See Wohlsteier, *Pearl Harbor*, p. 390.
116. Heuer, 'Cognitive Factors', pp. 35-6.
117. Knorr, 'Failures in National Intelligence Estimates', p. 461.
118. *Ibid.*, p. 457, citing Wohlsteier, *Pearl Harbor*, pp. 36, 390, 397.
119. Heuer, 'Cognitive Factors', p. 36.
120. *Ibid.*
121. Angelo Cordevilla, 'Comparative Historic Experience of Doctrine and Organization', in Godson (ed.), op. cit., p. 17.
122. Richard J. Heuer, Jr., 'Strategic Deception: A Psychological Perspective', a paper presented at the 21st Annual Convention of the International Studies Association, Los Angeles, California, March 1980, p. 45.
123. Handel, 'Strategic Surprise (First Draft)', p. 30.
124. Sarbin, 'Prolegomenon to a Theory', p. 158.
125. *Ibid.*
126. Steven Jay Gould, 'The View of Life', transcript of the 18 December 1984 PBS television broadcast, NOVA 1118 (Boston, MA: WGBH Educational Foundation, 1984), p. 11.
127. Benno Wasserman, 'Failure of Intelligence Prediction', *Political Studies* 8 (June 1960), 166-7.
128. Knorr, 'Failure in National Intelligence Estimates', p. 464.
129. *Ibid.*
130. *Ibid.*
131. Sarbin, 'Prolegomenon to a Theory', p. 169.
132. *Ibid.*
133. Heuer, 'Cognitive Factors', p. 35.
134. Wohlsteier, op. cit., p. 393.
135. Heuer, 'Cognitive Factors', pp. 34-5.
136. Sarbin, 'Prolegomenon to a Theory', p. 153.
137. See I. Nelson Rose, 'Litigator's Fallacy', *The Journal of the Section of Litigation, American Bar Association* 3 (Spring 1985), 61. ('It is a normal human reaction to look for factual capital to support one's psychological investment.')  
 138. For the best account of the pre-Dieppe amphibious assault thinking, see Haswell, *D-Day*, pp. 15-20.
139. *Ibid.*, pp. 22-3.
140. Hunt, 'Editorial Introduction to R.F. Hesteth's Manuscript - An Eyewitness Report of the Fortitude Deception', p. 229.
141. McKean, 'Decisions, Decisions', p. 26.
142. See Patrick Morgan, 'The Opportunity for a Strategic Surprise', in Knorr and Morgan (eds.), op. cit., p. 219.
143. Heuer, 'Cognitive Factors', p. 66.
144. Lewis Carroll, *Through the Looking Glass and What Alice Found There* (1872; reprint, New York: Avenal Books, n.d.), p. 100.
145. The Allies opted to bring their ports with them. At a meeting of the Service Chiefs in late May of 1942 Admiral Lord Louis Mountbatten remarked that 'if ports are not available we may have to construct them in pieces and tow them in'. Dwight D. Eisenhower, *Crusade in Europe* (New York: Doubleday, 1948; New York: Avon Books, 1968), p. 250.
146. Haswell, *D-Day*, pp. 132-3.
147. In Louis Tracy, *The Final War: A Story of the Great Betrayal* (London: 1896), pp. 78-80, a pre-First World War novel, the British used 'a great floating pier' to enable them to land on the coast of France far from the fortified port cities. In Tracy's book, the British land north of Le Havre.
148. Knorr, 'Lessons in Statecraft', p. 253.
149. *Ibid.*, p. 459.

- 150 Haswell, *Tangled Web*, p. 70.
- 151 Wasserman, 'Failure of Intelligence Predictions', p. 163.
- 152 Morgan, 'Opportunity for Strategic Surprise', p. 217.
- 153 *Ibid.*
- 154 Handel, 'Intelligence and Deception', 137.
- 155 Reinhard Gehlen, *The Service* (New York: Popular Library, 1971), p. 99.
- 156 German tactical intelligence, on the whole, was quite good throughout the war. Haswell, *D-Day*, p. 138 ('Gehlen could obtain accurate operational intelligence from units in contact with the enemy on the eastern front').
- 157 Heuer, 'Cognitive Factors', p. 55.
- 158 *Ibid.*, p. 57.
- 159 *Ibid.*, p. 59.
- 160 Handel, 'Intelligence and Deception', 154, n. 75.
- 161 McKean, 'Decisions, Decisions', p. 28.
- 162 Handel, 'Strategic Surprise', pp. 251-2.
- 163 *Ibid.*, p. 253.
- 164 Gould, 'View of Life', p. 1.
- 165 Sarbin, 'Prolegomenon to a Theory', pp. 154-5.
- 166 Warlimont, *Inside Hitler's Headquarters*, p. 410.
- 167 Gould, 'This View of Life', p. 19 ('Unconscious snagging'). See Wohlsteiner, *Pearl Harbor*, p. 393. The observation Roberta Wohlsteiner made in 1962 concerning Pearl Harbor fits exactly with what was going on in Germany. The analysts simply resolved all ambiguities in favor with the 'party line'.
- 168 Heuer, 'Cognitive Factors', pp. 39-40.
- 169 *Ibid.*, p. 40.
- 170 *Ibid.*
- 171 *Ibid.*
- 172 *Ibid.*
- 173 See Wohlsteiner, *Pearl Harbor*, p. 387.
- 174 Heuer, 'Cognitive Factors', p. 36.
- 175 *Ibid.*, p. 37.
- 176 *Ibid.*, p. 38, citing Jervis, *Perception and Misperception in International Politics*, p. 195.
- 177 Howells, 'Intelligence in Crises', p. 351.
- 178 Lewin, *American Magic*, p. 81.
- 179 Heuer, 'Cognitive Factors', p. 36.
- 180 McKean, 'Decisions, Decisions', p. 22.
- 181 Heuer, 'Cognitive Factors', p. 36.
- 182 Wohlsteiner, *Pearl Harbor*, p. 387.
- 183 Lewin, *American Magic*, p. 63.
- 184 Handel, 'Strategic Surprise', p. 245.
- 185 Lewin, *American Magic*, p. 64; Handel, 'Strategic Surprise', p. 246.
- 186 Thomas C. Schelling, 'Forward' in Roberta Wohlsteiner, *Pearl Harbor: Warning and Decision*.
- 187 All three quoted paradoxes are from Handel, 'Intelligence and Deception', 154, n. 75.
- 188 Richard K. Betts discusses this problem in terms of being 'preoccupied with other threats': 'Strategic Surprise for War Termination: Inchon, Dienbienphu and Tet', p. 160.
- 189 Laqueur, *World of Secrets*, p. 270 ('the Cassandra Syndrome').
- 190 Spicidel, *Invasion 1944*, p. 59.
- 191 Wohlsteiner, *Pearl Harbor*, p. 393.
- 192 Compare, Klaus Jürgen Müller, 'On the Difficulties of Writing Intelligence History: Some Reflections of an Old-Fashioned Historian', paper presented at the Intelligence and Military Operations Conference, US Army War College, Carlisle Barracks, Pennsylvania, 22-25 April 1986, p. 14.
- 193 Laqueur, *World of Secrets*, p. 270.

- 194 'Magic' Summary No. 798, 1 June 1944, A5, SRS 1320.
- 195 'Intelligence is the voice of conscience to a staff. Wishful thinking is the original sin of men of power'. McLachlan, *Room 39*, p. 365. In 1962, Roberta Wohlsteiner wrote that 'there is a good deal of evidence, some of it qualitative, that in conditions of great uncertainty people tend to predict that events that they want to happen actually will happen. Wishfulness in conditions of uncertainty is natural and hard to banish simply by exhortation - or by wishing'. *Pearl Harbor*, p. 397.
- 196 Earl F. Ziemke, 'Stalingrad and Belorussia: Soviet Deception in World War II', in Daniel and Herbig (eds.), op. cit., p. 270.
- 197 For an illustration of the distraction of self-righteousness in regard to the French, see Douglas Porch, 'French Intelligence and the Fall of France, 1930-1940', paper presented at the Intelligence and Military Operations Conference, US Army War College, Carlisle Barracks, Pennsylvania, 22-25 April 1986, p. 4.
- 198 Handel, 'Strategic Surprise', p. 254.
- 199 Handel, 'Intelligence and Deception', 125; 'Strategic Surprise', p. 263.
- 200 Handel, 'Strategic Surprise', pp. 353-4.
- 201 Gordon A. Harrison, *U.S. Army in WW II - Cross-Channel Attack*, p. 276; Ellis, *Victory in the West*, p. 198.
- 202 Irving, *Trial of the Fox*, p. 423.
- 203 *Ibid.*, pp. 435, 441; Max Hastings, *Overlord D-Day, June 6, 1944* (New York: Simon & Schuster, 1984), p. 68.
- 204 Ryan, *Longest Day*, p. 36; Friedrich Ruge, *Rommel in Normandy: Reminiscences by Friedrich Ruge* (San Rafael, CA: Presidio Press, 1979), p. 169.
- 205 Heuer, 'Cognitive Factors', p. 47.
- 206 McKean, 'Decisions, Decisions', p. 26.
- 207 Morison, *History of United States Naval Operations*, p. 49.
- 208 Wilmut, *Struggle for Europe*, p. 229.
- 209 *Ibid.*
- 210 Wilmut, *June 1944*, p. 63.
- 211 *Ibid.*
- 212 Friedrich Ruge, 'The Invasion of Normandy', in H.A. Jacobsen and J. Rohwar (eds.), *Battles of World War II: The German View* (New York: G.P. Putnam's Sons, 1965), p. 329.
- 213 Wilmut, *Struggle for Europe*, p. 217.
- 214 Hunt, 'Editorial Introduction', p. 229.
- 215 McLachlan, *Room 39*, p. 354.
- 216 Scheibe, *Mirrors, Masks, Lies and Secrets*; and 'The Psychologist's Advantage and Its Nullification: Limits of Human Predictability', *American Psychologist*, 33 (1978), 869-81.
- 217 Sarbin, 'Prolegomenon to a Theory', p. 165.
- 218 Heuer, 'Cognitive Factors', p. 60.
- 219 *Ibid.*, citing Barton Whaley, 'Strategem, Deception and Surprise in War', (diss., Massachusetts Institute of Technology, 1969), p. 164 and Appendix B.
- 220 The BIGOT procedures and the security scores are summarized nicely in Haswell, *D-Day*, pp. 152-8.
- 221 Camouflage, in the sense of disguising an object, and cover, in the sense of hiding it completely, are forms of passive deception. On the other hand, the use of decoys - fake planes, tanks, ships and depots - involves an active deception effort.
- 222 Wilmut, *Struggle for Europe*, p. 200.
- 223 For the theory of deception, see Haswell, *Tangled Web*, pp. 19-20, 30-47; Handel, 'Intelligence and Deception', 122-54; Heuer, 'Cognitive Factors', pp. 31-69; Sarbin, 'Prolegomenon to a Theory', pp. 151-73; Sherman and Whaley, 'Understanding Strategic Deception', pp. 171-94; Barton Whaley, 'Toward a General Theory of Deception', in John Gooch and Arnos Feldmutter (eds.), *Military Deception and Strategic Surprise* (London: Frank Cass and Co., 1982), pp. 178-91; and Donald C. Daniel and Katherine L. Herbig, 'Propositions on Military Deception', in Daniel and Herbig (eds.), op. cit., pp. 3-30.

- 224 Albert Norman, *Operation Overlord: Design and Reality* (Harrisburg, PA: The Military Service Publishing Co., 1952), p. 39.
- 225 Plan Bodyguard was approved by the Combined Chiefs of Staff on 20 January 1944, and sent to SHAEF for the purpose of planning on 22 January. C.C.S. 459/2, 20 January 1944, Plan 'Bodyguard', with enclosure, and Memorandum for the Supreme Commander, Allied Expeditionary Force, 22 January 1944, Subject: Overall Deception Policy for War Against Germany'. Records of SHAEF, Record Group 331, File No. 381 *Bodyguard*, MMR, NA.
- 226 Wilcox, *The Struggle for Europe*, p. 199.
- 227 SHAEF/18219/OPS (b), 3 June 1944, Records of SHAEF, Record Group 381, File No. *Fortitude*, MMR, NA. See also, Plan 'Bodyguard', Combined Chiefs of Staff, C.C.S. 459/2, 20 January 1944, w/encl., Records of SHAEF, Record Group 381, File No. *Bodyguard*, MMR, NA. See Charles Cruickshank, *Deception in World War II* (Oxford: Oxford University Press, 1979; New York: Oxford University Press, 1980), pp. 85-205.
- 228 Compare Müller, 'On the Difficulty of Writing Intelligence History', p. 9 ('The German evaluation of the strategic situation and, therefore, of expected Allied operations has never been decisively influenced by Allied deception operations'). Admits Normandy deception was an exception. Letter to author, 12 December 1986.
- 229 Hastings, *Overlord*, p. 77.
- 230 Montagu, *Beyond Top Secret Ultra*, p. 61.
- 231 Fleuer, 'Cognitive Factors', p. 42.
- 232 Handel, 'Intelligence and Deception', 126.
- 233 See Handel, 'Intelligence and the Problem of Strategic Surprise', pp. 237-39, particularly the Time Matrix at p. 238.
- 234 Müller, 'On the Difficulties of Writing Intelligence History', p. 25.
- 235 See Haswell, *D-Day*, p. 78; Earl F. Ziemke, *The German Northern Theater of Operations 1940-1945* (Washington, DC: Department of the Army, 1959), pp. 213-14.
- 236 C.O. (R) 25, July 1943, 'Rattle', Record of Conference, etc. to Study the Combined Operation Problems of 'Overlord', with *Strategic Background* C.O.S.S.A.C. (43) 29, 25 June 1943, 92-98, Records of SHAEF, Record Group 331, File No. 337/16 *Rattle Conference*, MMR, NA. See also, Haswell, *D-Day*, pp. 109-10; Harrison, *Cross Channel Attack*, p. 72.
- 237 Unlike the 'Crust' concept, with the M.L.R. at the high tide water's edge, normal *Wehrmacht* tactical doctrine called for the main line of resistance, the *Hauptkampflinie*, to be from 7,000 to 9,500 meters behind the combat outpost line, and stressed the use of immediate and violent counterattacks. W.J.K. Davis, *German Army Handbook 1939-1945* (1973, New York: Arco, 1984), pp. 57-8.
- 238 Karl Dönitz, *Memoirs, Ten Years and Twenty Days* (Cleveland, OH: The World Publishing Co., 1959), p. 392.
- 239 If a defender waits too long to begin even the most general sort of defensive fortification work, then the enemy may take the activity to mean its plans have been compromised and change them. Walter Laqueur makes the observation - and by doing so, notes the paradox - that 'it could be argued that, almost by definition, intelligence is always bound to fail. If it correctly predicts the political or military initiative of another country, and as a result, countermeasures are taken and the [predicted] initiative does not take place, it will be blamed for making false predictions'. Laqueur, *World of Secrets*, p. 4.
- 240 Handel, 'Intelligence and Deception', 154, n. 75.
- 241 Ibid, p. 40.
- 242 Ibid, p. 50.
- 243 Fleuer, 'Cognitive Factors', p. 41.
- 244 Handel, 'Strategic Surprise (Trust Draft)', p. 11.
- 245 Fleuer, 'Cognitive Factors', p. 41.
- 246 See Lawrence J. Edwards, 'Discussion - Avoiding Political and Technological

- Surprise in the 1980's', in Godson (ed.), op. cit., p. 112.
247. *Living, Trail of the Fox*, pp. 411-12.
248. For a detailed account of the *Abwehr*/RSIIA rivalry and the eventual downfall of Admiral Canaris, see Heinz Höhne, *Canaris (Canaris: Patriot im Zweifels)*, trans. J. Maxwell Brownjohn (Munich: Bertelsmann, 1976; New York: Doubleday, 1979), pp. 163-554 *passim*. Shorter accounts include: Peter R. Black, *Ernst Kaltenbrunner: Ideological Soldier of the Third Reich* (Princeton, NJ: Princeton University Press, 1984), pp. 176-217 *passim*; Lauran Paine, *German Military Intelligence in World War II* (Briarcliff Manor, NY: Stein and Day Publishers, 1984), pp. 181-8; and Gehlen, *The Service*, pp. 93-5.
249. It is interesting to note that Hitler's decision to fuse the *Abwehr* into the RSIIA was not prompted by a failure of the *Abwehr* collection or analysts effort. Instead it was prompted by a bomb in a crate of oranges Hitler had forbidden the initiation of any acts of sabotage in Spain. Contrary to his orders, the *Abwehr* station in Spain planted a bomb aboard a British freighter that was bound for England with a cargo of oranges. The incident infuriated the Führer. Black, *Kaltenbrunner*, p. 194.
250. Ibid.
251. Cordevilla, 'Comparative Historical Experience', pp. 25-6. See also, Boog, 'German Air Intelligence', p. 4 ('The Army Manual II, Div. 89 g of 1941 ... stated that it was the commander who prepared the situation estimate with his Chief of Staff or Operations Officer').
252. Ibid.
253. Walter Warlimont, 'From Invasion to the Siegfried Line', in *MS ETIHNIT: I* (19-29 July 1945), p. 30, MMR, NA.
254. Ibid, pp. 30-31.
255. Cordevilla, 'Comparative Historical Experience', p. 26.
256. Paine, *German Military Intelligence*, pp. 116-17.
257. Haswell, *D-Day*, p. 138.
258. Cordevilla, 'Comparative Historical Experience', p. 25; Haswell, *D-Day*, p. 51.
259. Haswell, *D-Day*, p. 51.
260. Micham, *Rommel's Last Battle*, pp. 108-10.
261. Handel, 'Strategic Surprise', p. 265.
262. Ibid.
263. Ibid, p. 240.
264. Lewin, *American Magic*, p. 93, citing Samuel Eliot Morrison's account of the Battle of Midway.
265. Roberta Wohlstetter noted in regard to the failure at Pearl Harbor, 'we have found the roots of this surprise in circumstances that affected honest, dedicated, and intelligent men'. Wohlstetter, *Pearl Harbor*, p. 397.
266. We are mindful of R. Fleetwood Hestek's warning that 'it is always unsafe to apply too literally the experiences of one war to the changed circumstances of another'. Hunt, 'An Eye-witness Report of the *Fortitude* Deception: Editorial Introduction to R.F. Hestek's Manuscript', p. 233, citing 'Fortitude: A History of Strategic Deception in North Western Europe, April 1943 to May 1945' (February 1949), Conclusion.
267. The Allied landings in North Africa, Sicily and Italy add to the list of disasters for the Germans in the Second World War. There are numerous other examples involving Soviet forces on the Eastern Front. See Ziemke, 'Stalingrad and Belorussia', pp. 243-76.
268. As Roberta Wohlstetter noted: 'In view of all these limitations to perception and communication, is the fact of surprise at Pearl Harbor, then, really so surprising?' Wohlstetter, *Pearl Harbor*, p. 395.
269. Handel, 'Clausewitz in the Age of Technology', p. 26.
270. It may be that in today's high technology intelligence collection environment, where information is compartmentized into numerous categories of secrecy, the study of recent instances of surprise is practically impossible outside a small circle of people in the government. Consequently, detailed examinations of historic

instances of surprise, such as the D-Day event, must serve to instruct a wider audience both within and without the government and the armed services.

- 271 In 1962 Roberta Wohlstetter concluded that 'the possibility of ... [strategic] surprise at any time lies in the conditions of human perception and stems from uncertainties so basic that they are not likely to be eliminated, though they might be reduced'. Wohlstetter, *Pearl Harbor*, p.397.

- 272 Ibid, pp.244, 265: 'On this account, understanding but not being able to avoid the phenomenon has led to a certain futility'.

- 273 Ibid, p.244.

- 274 But even here a word of caution is in order, for as Pascal Lainé has so wisely noted: 'Sphinx, your great power is not in the solution of enigmas, but in the appearance of one who offers this possibility'. David Hamilton and Pascal Lainé, *Tender Cousins* (New York: Quill, 1981), p.87.

- 275 According to Field-Marshal Earl Alexander of Tunis: his quote, which I have modified, is from McLachlin, *Room 39*, p.338.

## Bibliography

### Books

Adan, Avraham, On the Banks of the Suez, Jerusalem, Presidio Press, 1980. 956.048/A222o.

Ambler, Eric, Send No More Roses, London, Weidenfeld & Nicolson, 1977.

Clausewitz, Carl von, On War, Edited by Michael Howard and Peter Paret, Princeton, NJ, Princeton University Press, 1976.

Cruikshank, Charles G., Deception in World War II, New York, Oxford Press, 1980.

D'Aguilar, Lieutenant General Sir George C., The Military Maxims of Napoleon, New York, MacMillan, 1987.

Depuy, R. Ernest and Trevor N., The Encyclopedia of Military History: From 3500 B.C. to the Present, New York, Harper & Row, 1986.

Glantz, David. M., Soviet Military Deception in the Second World War, London, Cass Limited, 1989.

Glantz, David M., The Red Mask, London, Cass Limited, 1987.

Guttman, Allen, Korea and the Theory of Limited War, Lexington, Mass, D.C. Heath, 1967. 951.9042/G985k.

Hemsley, John, Soviet Troop Control: The Role of Command Technology in the Soviet Military System, London, Brasseys, 1982. 355.330947/H492s.

Herzog, Chaim, The Arab-Israeli Wars, War and Peace in the Middle East from the War of Independence through Lebanon, New York, Vintage Books, 1982.

Luttwak, Edward N., Strategy: The Logic of War and Peace, Cambridge, Mass, Harvard University Press, 1987.

Manstein, Erich von, Lost Victories, Presidio Press, Novato, CA, 1982.

Sharon, Ariel, Warrior: The Autobiography of Ariel Sharon, New York, Simon & Shuster, 1989. 956.9405092/S531w.

Shazly, Saad el, The Crossing of the Suez, San Francisco, CA, American Mideast Research, 1980. 956.048/S538c.

Viorst, Milton, Sands of Sorrow, New York, Harper & Row, 1987.

Wheatley, Dennis, The Deception Planners, London, Hutchinson, 1980. 940.548641/W557d.

Wavell, A.P., The Palestine Campaign, London, Constable, 1936.

Machiavelli, Niccolo, The Art of War, Introduction by Neal Wood, Indianapolis, Bobbs-Merrill, ,1965.

Zhukov, Georgi K., Marshall Zhukov's Greatest Battles, New York, Harper & Row, 1969.

Zhukov, G.K., The Memoirs of Marshal Zhukov, London, Jonathan Cape, 1971.

### Government Publications

British Army Field Manual, Volume V, All Arms Tactics, Part 5, Deception in War, 1985.

British Army Intelligence Centre Plan of Instruction, Doctrine-Deception, (Templar Barracks, TRDC # 6902: February 1983).

British Army Staff College Plan of Instruction, Tactical Deception, British Royal Staff College, TDRC # 6347, October 1963.



Joint Chiefs of Staff, Department of Defense Publication No. 1, Dictionary of Military and Associated Terms, Washington D.C.: U.S. Government Printing Office, June 1987.

U.S. Army Field Manual 34-1, Intelligence and Electronic Warfare Operations, Washington D.C.: U.S. Government Printing Office, July 1987.

U.S. Army Field Manual 90-2, Battlefield Deception, Washington D.C.: U.S. Government Printing Office, October 1988.

U.S. Army Field Manual 100-5, Operations, Washington D.C.: U.S. Government Printing Office, May 1986.

U.S. Army Field Manual 101-5, Staff Organization and Operations, Washington D.C.: U.S. Government Printing Office, May 1984.

U.S. Army Field Manual 101-5-1, Operational Terms and Symbols, Washington D.C.: U.S. Government Printing Office, October 1985.

Naval Marine Corps Manual 2796, Maneuver in War, (Willoughby, Charles Andrew), Harrisburg, PA, 1939.

V Corps, Battlefield Deception Briefing, Frankfurt, West Germany, July 1989.

V Corps, Deception in Support of REFORGER 88, Public Affairs Office Release (CPT Paul A. Haveles, USA), Frankfurt, West Germany, July 1989.

7th Infantry Division (Light), Standard Operating Procedures for Deception, AFZW-GC-PO, Fort Ord, CA, November 1985.

### Periodicals

Axlerod, Robert, "The Rational Timing of Surprise", World Politics (January 1979).

Betts, Richard K. , "Analysis, War, and Decision: Why Intelligence Failures are Inevitable", World Politics, Princeton, NJ, Princeton University Press, 1978.

Crews, Ed, "Elite Units," Modern Warfare, No. 2, Leesburg, VA 1989.

Cubbage, T. L., "The Success of Operation Fortitude: Hesketh's History of Strategic Deception," Intelligence and National Security, no.3, (July 1987).

Cubbage, T. L., "German Misapprehensions Regarding Overlord: Understanding Failure in the Estimative Process", From Intelligence and National Security, London, Cass, July 1967.

Dick, C. J., "Catching NATO Unawares: Soviet Army Surprise and Deception Techniques," International Defense Review, Vol.19, 1-1986.

Handel, Michael I., "Introduction: Strategic and Operational Deception in Historical Perspective", From Intelligence and National Security, London, Cass, July 1967.

Miller, Edwin H., "Tactical Deception in WW II," Journal of Electronic Defense, October 1985.

Poynton, Major D.M., "Surprise Can Be Achieved in War Despite Advances in Electronic Warfare and Surveillance Devices," Defence Force Journal, No. 25 (British Staff College TRDC #5157), Australia, Nov-Dec 1980.

Savoie, Thomas A., "Are We Deceiving Ourselves," Military Review, March 1987: 37-45.

Savoie, Thomas A., "Deception at the Operational Level of War," Army Magazine, April 1987: 30-40.

### Unpublished Materials

Cubbage, T. L. II, Deception and Operation Market: Surprise Does Not Mean Victory, (unpublished), 1989.

Dolinisi, Captain Gerald A., PSYOPS as a Deception Multiplier, (unpublished), November 1989.

Labor, Captain Royce L., Deception Planning Considerations, (unpublished), January 1989.

Wass de Czege, Huba, Understanding and Developing Combat Power, (Unpublished Paper), 1983.

### Theses

Awwad, H.S., The Use of Deception in the 1973 Arab-Israeli War, (British Army Royal Staff College, TDRC #7999: October 1986).

Burgdorf, Charles E., An Appreciation for Vulnerability to Deception at the Operational Level, Fort Leavenworth: School of Advanced Military Studies Monograph, 1987.

Dick, C.J., Soviet Views on Strategic and Operational Surprise and Deception, Soviet Studies Research Centre, Royal Military Academy, Sandhurst, October 1986.

Edwards, Captain S.R., 'D' Force, (British Royal Staff College, TDRC #7998: July 1986).

Mackenzie, J.J. G., (Brigadier, OBE), Surprise - The Neglected Principle, (British Royal Staff College, TDRC # 8025: 1988).

McLeod, Colonel I. OBE, Deception in the Falklands War, (British Royal Staff College, TRDC #7877:, 1978).

Savoie, Thomas A., Deception at the Operational Level of War, Fort Leavenworth: School of Advanced Military Studies Monograph, 1986.

Savoie, Thomas A., Tactical Deception: A Lost Art?, Fort Leavenworth: School of Advanced Military Studies Monograph, December 1986.

Schmidt, Thomas C., The Decision to Take Risk: A Process for Effective High-Risk Decision Making at Senior Levels, Fort Leavenworth: School of Advanced Military Studies Monograph, 1986.

Starling, Colonel J.G. MBE, Confidence Trickery in Defense, (unpublished), Headquarters SHAPE, (British Royal Staff College TRDC# 6217: 1986).

Whaley, Barton, Stratagem: Deception and Surprise, Boston: Massachusetts Institute of Technology, 1968.

### Interviews

Cavazos, General Richard, Fort Leavenworth, KS, November 1989.

Clark, Brigadier General Wesley, Fort Leavenworth, KS, November 1989.

Cubbage, T. L., Telephone Interview, Bartlesville, OK, April 1990.

Eldridge, Captain, Lance, ODCSOPS(FDI), Washington, D.C., December 1989.

Livsey, General William J., Fort Leavenworth, KS, September 1989.

Luttwak, Dr. Edward N., Ph.d, Chevy Chase, MD, December 1989.

Martinez, Major Eduardo, Jr., Fort Leavenworth, KS, March 1990.

Montano, Colonel James J., Alexandria, VA, December 1989.

Stanley, Colonel Warner Dean III, Washington, D.C., December 1989.

Starry, General Donn, Fort Leavenworth, KS, September 1989.

Swain, Colonel Richard M., Fort Leavenworth, KS, October 1989.

### Briefings

US Army Office of the Chief of Staff for Operations (ODCSOPS-FDI), U.S. Army Battlefield Deception Briefing, October 1989.

Rand Corporation Arroyo Center, Arroyo Center Operations Based  
Deception Briefing, 14 September 1989.

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Commander  
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Alexandria, VA 22332-0400

MG Rudolph Ostovich III  
Commander  
U.S.A. Aviation Center and Fort Rucker  
Fort Rucker, AL 36362-5000

MG J.H. Binford Peay III  
Commander  
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Fort Campbell, KY 42223-5000



MG Michael F. Spigelmire  
Commander  
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Fort Benning, GA 31905-5000

MG Thomas C. Foley  
Commander  
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MG Fred A. Gorden  
Commander  
25th Infantry Division (Light)  
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MG David M. Maddox  
Commander  
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Commandant  
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MG Robert Wagner  
Commander  
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Chief of Staff  
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APO SF 96358-0210

BG Wesley Clark  
Commander  
U.S. Army National Training Center  
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BG Dennis V. Crumley  
ADC, 2d Infantry Division  
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BG Samuel E. Ebbeson  
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Fort Richardson, AK 99703

BG George Fisher  
ADC(M)  
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BG John D. Howard  
ADC  
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BG Dennis P. Malcor  
ADCS for Training  
TRADOC  
Fort Monroe, VA 23651-5000

BG William M. Matz, Jr  
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BG Stephen Silvasy, Jr  
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## **Biography**

**Major Jack Spencer is a Military Intelligence officer attending CGSC. He served as a medic with U.S. Marine Corps Battalion Reconnaissance in Vietnam and was commissioned Air Defense Artillery branch in 1974 from California State Polytechnic University in San Luis Obispo, California.**

**After service as a special weapons custodian with the Italian Air Force he was branch transferred to Military Intelligence and assigned as the S2 of the 1/509th Infantry in Vicenza, Italy.**

**Following Advanced Course at Fort Huachuca he served as S2 of the 1st Squadron, 2d Armored Cavalry Regiment in Bayreuth, West Germany. Next assigned to Headquarters VII Corps as the G2 Operations Officer, the Corps Long Range Surveillance and Border Operations Officer, and finally as Company Commander. He participated in four REFORGERS and numerous multi-national exercises.**

**MAJ Spencer was then assigned to the 7th Infantry Division (Light) as the 1st Brigade (9th Infantry Regiment) S2 throughout the building and Light Division certification process. He was next assigned as the G3 Plans officer during the period of post certification contingency plan development. He completed this tour with assignment as the Military Intelligence Battalion S3.**

**Currently assigned as the J3 EW Plans Officer, Headquarters, United States Central Command, Mac Dill Air Force Base, Tampa, Florida.**

**Major Spencer's awards include the Meritorious Service Medal with oak leaf cluster, the Army Commendation Medal, the Army Achievement Medal with 4 oak leaf clusters, and various overseas medals. He has been awarded the Ranger Tab, Airborne wings, and British Airborne wings.**